

DECEMBER
1950

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

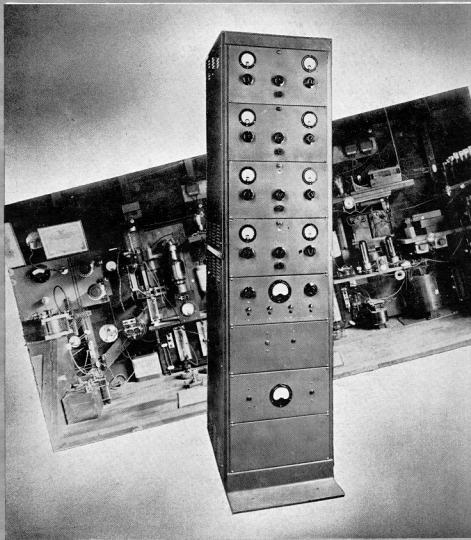
Amateur Radio

VICTORIAN
DIVISION'S
25TH
ANNIVERSARY

For the Experimenter
and Radio Enthusiast

9^{D.}

Registered at the G.P.O., Melbourne, for
transmission by post as a periodical.



PHILIPS congratulate Victorian Division upon 25th Anniversary.
1951 is also the 25th Anniversary of PHILIPS in Australia.

"HAM" RADIO SUPPLIERS

(KEN MILLBOURN, PROP.)

5A Melville Street, Hawthorn, Victoria

(East Kew Tram Passes Corner, opposite Vogue Theatre)

(Phone: Hawthorn 4465)

Please make Money Orders and Postal Notes payable at North Hawthorn Post Office.

BARGAINS — BARGAINS — BARGAINS

BC348 Communication Receiver, crystal filter, 8 meter. Band coverage 200 Kc. to 18 Mc. less the broadcast band. Converted to 6 volt a.c. supply, less power supply, £45

ARS RECEIVERS, A.W.A., 11 Valves, 150 Kc. to 25 Mc., less Power Supply. Tested and working 100% £20

"Ham Receiver," three bands: 40-20-10 metres. One r.f. stage 6AK5, ECH35 mixer, four i.f.s. back to back, 455 Kc. using 6U7s, 6B6 driver, 6V6 output, 6J7 b.f.o., 6H6 noise limiter, bandspread, Eddystone dial, grey crackle case. Less speaker, complete with internal A.C. Power Supply £22/10/-

AMR300 Communications Receiver, four bands, band-switched, 1.5 to 24 Mc., variable xtal filter, nine valves, two r.f. stages, 8 meter. As new £65

High Frequency Receiver, Australian AR301, uses three 954s, one 995. Six 6AC7 I.F. Stages at 30 Mc. Easily converted to 144 Mc. £7/10/- each

SCR522 Transmitter Section, has two tested 832s, modulator two 12A6s Our Price £12/10/-

WANTED TO BUY:

9 or 18 volt input L.F.F. Genemotors for 15/- each

Two stage Transmitter, 25 watts, in small black crackle cabinet. Line-up: 6V6 xtal osc., 807 final, coils for 40, 20, 10 metre bands; modulator, 6J7, 6N7 into 6V6s in push pull; A.C. Power Supply. Metered stages, complete with moving coil microphone £30

Transmitter, English, Wireless type 36, 50 watt. Three stages: 807 osc. (xtal or v.f.o.), 807 buffer-doubler, pair 807s in final. Modulator: speech amplifier 6C5, 6C5, 6C5 into pair 807s in AB2. Complete with power supply, 110 to 250 volt input, and including Microphone £40

Moving Coil Microphones, with stand £3

Moving Coil Microphones, less stand £2/10/-

Kingsley FM Adaptor, 455 Kc. Transformer, Complete with valves £4

ASSORTED CRYSTALS AVAILABLE FOR ALL BANDS

A.W.A. Radio Compass, 11 valves, Type 1C5852, three bands: 275 to 1700 Kc., 2.3 to 3.3 Mc., 6 to 7 Mc. I.F. channel 532.5 Kc. No generator £12/10/-

Super Tester Valve Tester, as new £17/10/-

AT10 plug-in coil units, has two variable condensers (approx. 50 pF.) and two coils. Ideal for wrecking. £1 each.

Packing Charge on all goods over 10 lbs. in weight, 5/- extra.

WE OFFER OUR CONGRATULATIONS TO THE VICTORIAN DIVISION UPON THEIR 25th ANNIVERSARY

WANTED TO BUY—RADIO PARTS, VALVES, TRANSFORMERS, RECEIVERS, TRANSMITTERS, Etc.

Type A Mark 3 Transceiver, 6 volt DC operation. No spares. Nice condition, as traded £12/10/-

Hammarlund plug-in coil units, contains two variable condensers, coil formers, etc. Price £3/10/-

Transmitter, home-built, in black crackle cabinet (small size). Operates on 6 and 80 metre bands; separate Transmitters for each band. 50 Mc. Tx—6N7 xtal osc., 6N7 doubler, 832 final. 3.5 Mc. Tx—6N7 xtal osc., 832 final. 6L6 modulator (Heising) complete with AC power supply. Easily converted to DC operation £17/10/-

Tube Special—7193s, 5/- each

0-10 Ma. Pullin Meters, 4 inch, new each 30/-

New Meters—0-500 microamps. £1/2/6

New Meters—0-1 Ma. full scale £1/2/6

New Meters—0-40 0-120 Ma., separate connection £1/2/6

English L.F.F. Units. Tube line-up: two VR135 (high freq. triodes), two VR78 (diodes), four VR65A, Eddystone Butterfly Condenser, 1 uF, 1,000 v.w. Block Condenser, Genemotor 11-12 v. input at 3.8 Amp., output 480 v. 40 Ma. Good assorted quantity of Resistors and Condensers, ideal for wrecking, condition as new £2 each.

6 feet lengths of 1/2 inch Co-ax Cable, 72 ohms, with Connectors both ends 5/-

Jumbo 4-Pin Valve Sockets for 211, etc. each 7/6

VALVES, Tested, Out of Disposals Gear

5/- each—Bargain Price—7193, 6H6, 6SH7, 6B5.

10/- each—2X2, 6A8G, 6C8G, 6G6, 6J7G, 6B7, 6N7, 6U7G, 6X3, 12A6, 12AH7, 12C8, 12SG7, 12J5, 879, 1629, 9003, 954, 955, 956, HY615.

10/- each—Metal: 6SC7, 6SF7, 6SR7, 6SS7, 12SK7, 12SR7.

10/- each—Specials (new)—6A6, 6BF2, EL3, EF50, 50L6, 25L6, 25Z5.

10/- each—Locktal type: 7H7, 7C5, 7G7, 7Y4, 7E6, 7A8, 7W7, 7N7, 7A4, 7F7, 1299, 1291, 1203A, 1201, 1LD5, 1LN5, 28D7, 35Y4.

15/- each—6SN7, 6SL7.

832, 50/- each.

A large variety of 2 volt Battery Valves are also in stock.

DECEMBER - - 1950

Vol. 18. No. 12

AMATEUR RADIO

Published by the Wireless Institute of Australia,
Law Court Chambers, 191 Queen Street,
Melbourne, C.I.

EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

A. K. HEAD, VK3AKZ.
L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

ADVERTISING REPRESENTATIVE FOR VICTORIA:

W. J. LEWIS,
20 Queen St., Melbourne, C.I.
Telephone: MU 5154.

ADVERTISING REPRESENTATIVE FOR N.S.W. AND QUEENSLAND:

L. W. CRANCH,
Room 302, 17 Bond St., Sydney.
Telephone: BU 3879.

PRINTERS:

"RICHMOND CHRONICLE,"
Shakespeare St., Richmond, E.I.
Telephone: JB 2419.

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," Law Court Chambers, 191 Queen St., Melbourne, C.I., on or before the 8th of each month.

Subscription rate in Australia is 9/- per annum, in advance (post paid) and A10/6 in all other countries.

Wireless Institute of Australia
(Victorian Division) Rooms' Telephone is FJ 6997.

EDITORIAL



Victorian Division's 25th Anniversary

This number of "Amateur Radio" marks the 25th Anniversary of the Victorian Division of the Wireless Institute of Australia. On behalf of this Division, I wish to thank the Federal Executive of our Institute for affording me the privilege of writing this editorial.

In thanking Federal Executive I am reminded of changes which have occurred since 1st December, 1925, when our Victorian Division was incorporated under the Companies Act. In the next few years various commercial journals became in turn the official organ of the Wireless Institute of Australia. October, 1933, saw the first issue of "Amateur Radio," as the official organ of the Victorian Division and of the Royal Air Force Wireless Reserve. The editorial by the President, the late George Thompson, claimed approximately 300 members and three affiliated clubs for Victoria. The Victorian Railways Institute Wireless Club was one of these, as it is today. That issue contained an article by Max Howden, VK3BQ, appropriately entitled "Simple Crystal Control." It was a veritable milestone in Amateur Radio. In November, 1933, the editorial stated that "we have been honoured and are proud to state that this journal is now recognised by the Federal Headquarters as the official organ of the Wireless Institute of Australia."

Subscribers to the Memorandum of Association formally incorporating the Victorian Division of the Wireless Institute of Australia were Maxwell Howden, the late R. M. Dalton, E. J. Masters, Bruce Hardie, and the late K. Love. To these men and others of that time, Victorian Division owes a good deal. We have

benefitted not only from their foresight in organisation, but also from their technical ability in the field of Amateur Radio. Their success in the Trans-Pacific Tests of 1923 and in the first transmission of speech to England in 1924 were steps in a series of remarkable developments.

In those 25 years, Amateur Radio has achieved much. The Victorian Division, now consisting of 720 members, is proud that its members have contributed to those achievements, and it is a loyal section of the parent Australian organisation now consisting of 2500 members.

Yes, those 25 years have seen great things in Amateur Radio in our portion of the Ham world, but we must now look forward. What are the grounds for allocation of portion of modern communication channels for the exclusive use of our section of the community, mainly as a hobby? In present times it is understandable that increasing difficulty is experienced by any section in alienating community property for exclusive use of that particular section. Amateur Radio must feel the affect of this trend. What grounds have we to make special claims and what have we to offer in return?

First to mind is the service of Amateur Radio in emergencies. October issue of this magazine contained a letter of thanks to Amateur operators from the Post Master-General for their help in the flood peril in New South Wales. Members will recall similar instances where Amateur Radio has been privileged and able to afford help to the community, and the recent letter from the P.M.G. is very pleasing and reassuring.

(Continued on Page 11)

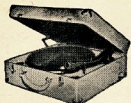
The Contents . . .

"The Quizmaster"	3	Western N.S.W. Amateur Emergency Activity	12
Using Type 19 Genemotor for 12 Volt Dc Operation	4	DX Notes by VK4QL	13
Converting ZB2 Homing Adaptor for 50 or 144 Mc.	6	Ionospheric Predictions	13
Results of 1949 VK-ZL DX Contest	8	The Ross A. Hull Memorial V.H.F. Contest, 1951	15
14th B.E.R.U. Contests, 1951 ..	9	Fifty Megacycles and Above	15
Our Cover	9	Abstracts, Overseas Magazines ..	16
Time Marches On	10	Federal, QSL, and Divisional Notes	17
		Correspondence	24

Homecrafts

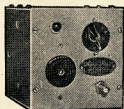
PTY. LTD.

Xmas Bargains For The Radio Enthusiast



CAPITOL GRAMO. UNIT

Incorporates English Collaro Variable Speed Motor and Pick-Up, in streamlined leatherette carrying case; 12 Gns. Terms: £2/- deposit, 4/3 weekly.



JEWELL AUTO PACK

Enables you to use your ordinary AC Mantel Lamp in your car. 6 or 12 volt models complete with instructions, 9 Gns.



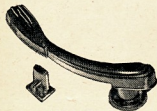
SAPPHIRE GRAMO. NEEDLES

The lowest price quality Sapphire Needle on the market. The English "Ferrocart" with over 2,000 playings; guaranteed. Trailer type, as illustrated, only 9/6.



SUPER METER BARGAIN

English 0-1 DC Milliamp. Moving Coil 2 inch scale. Meter. Brand new in original carton. Only 29/11.



CRYSTAL PICK-UP BARGAIN

Streamlined plastic lightweight High Fidelity Crystal Pick-Ups with only 1 to 1 1/8 oz. needle pressure. Price, as illustrated, cut to only 29/11.



THE BYER R33 RECORDER

A complete Portable Recording Studio. Operates from mains, makes commercial standard recordings, complete with amplifier, microphone and two speakers. Housed in leatherette carrying case. Price, complete, £120. Terms: £25 deposit, 28/6 weekly.



TORCH BARGAIN

Five Cell Focusing Torches. All chrome finish, as illustrated. Case with globe, 19/11. Batteries extra.



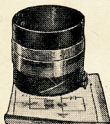
FERROCART CRYSTAL SET

In streamlined plastic cabinet. Complete with Brown's English Headphones. The Ideal Xmas Gift. Price only £4/12/6.



SMALL INSTRUMENT CABINETS

Built with 18 gauge steel. Grey or brown crackle finish. Size 11 x 7 x 5 1/2 inch, 50/- with panel as illustrated. Sloping front type 9 x 8 1/2 x 4 1/2 inch, 24/-.



BURON CRYSTAL SET COILS

Complete with circuit diagram, 4/6 each.



BATTERY CHARGER KIT

Kit of parts to build a 6 volt 4 amp. Battery Charger. Kit includes an English Selenium Rectifier, Transformer, black crackle finish metal case, two terminals, hook-up wire and circuit blue print instruction. 12 volt, 5/- extra. Price, as illustrated, £4/10/-.



New Pale Micro-meter, model M30.

£12/17/6 including sales tax. Terms 52/- deposit, 4/6 weekly.



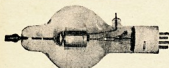
New Capitol Microgram;

combined high fidelity amplifier, speaker, electric motor and pick-up, in smart leatherette carrying case. Price, as illustrated, £25/10/-. Terms £5/10/- deposit, 8/9 weekly.



Karsel Kit, Car Radio

Kit as described in "Radio and Hobbies," May, 1949, issue. Kit-set complete to the last nut and bolt. Price, including sales tax, 20 Gns.



SUPER TRANSMITTING TUBE BARGAIN

Brand new American imported Elmec 100TH Tubes. Reduced from 8 Gns. to 49/6.



MOTOR BARGAIN

Brand new Electric Synchronous Motor. Plays 10 and 12 inch records. Constant speed. Price, 65/6.

COUNTRY AND INTERSTATE CLIENTS PLEASE ADD FREIGHT OR POSTAGE.

AIR CORED 465 Kc. I.F. TRANSFORMERS

Cut to only 2/11 each.



290 LONSDALE STREET, MELBOURNE

Central 4311

"THE QUIZMASTER"

BY C. A. CULLINAN,* VK7XW

"Have your signals that smooth velvety sound that so many young receivers like to caress?"

"Does your beam put out more signal to the rear than the front?"

"Are you having trouble winding coils for that new receiver?"

"If so, friends, listen closely whilst I tell you about utopia. For nothing down and a quid a week for life you can buy . . ." Hold on, looks as though I'm writing a "commercial," so let's get down to business or rather the "Quizmaster" for this little gadget will give you the answer to many of your problems—in Amateur Radio of course.

So we present "The Quizmaster," a multi-purpose instrument with a host of uses.

Fundamentally "The Quizmaster" comprises a meter, a tuned circuit and a power supply that can be switched to any one of the valves to give a—

- Grid Dip Oscillator.
- Good Phone Monitor.
- Field Intensity Meter.

By-products of these functions (as the atomic boys say) enable "The Quizmaster" to be used as a rough checking frequency meter and a good over-modulation monitor as well as many other functions.

Reference to the circuit shows that as a grid dip oscillator, the tuned circuit is connected to a 6V6G oscillator valve, the meter is inserted in the grid circuit and plate voltage is obtained from a regulated supply using a VR150/30.

In the second switch position another 6SN7 is brought into use. The first half of this valve is employed as a diode and is followed by an audio amplifier. The meter is connected into the diode circuit and is used to check over-modulation, as a movement of the meter during modulation indicates carrier shift.

When the selector switch is moved to the third position, a 6SN7 is substituted for the 6V6G oscillator. This 6SN7 acts as a plate detector driving a vacuum tube voltmeter, the meter being connected to the second half of the 6SN7.

"The Quizmaster" is housed in a small metal cabinet, the front panel of which contains the various controls, also a terminal and a co-ax connector.

It will be observed that the coil has a small primary coil, one end of which is earthed, the other end being brought out to the terminal and co-ax connector just mentioned.

The purpose of this duplication is that when used as a monitor a piece of rigid wire can be connected to the terminal in the fashion of a small vertical antenna. On the other hand, when used as a grid dip oscillator, a low impedance link circuit is employed via the co-ax connector.

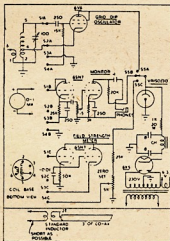
The parts list indicates that the switch must be of the non-shorting type—that is does not short between contacts when being turned. If a shorting type of switch is used, the meter will get banged about during switching unless some means is taken to remove the h.t. voltage.

* 12 Montrose Place, Launceston, Tas.

GRID DIP OSCILLATOR

For use as a grid dip oscillator, the instrument must be calibrated and this can be done in any convenient manner. As "The Quizmaster" is not a precision frequency meter, no attempt has been made to use temperature compensation, etc. However, for grid dip purposes its calibration is sufficiently accurate for Amateur needs—likewise it can be used for approximate frequency measurements. A two-turn coupling coil at the end of a length of co-ax cable or something similar makes a simple job of coupling the oscillator to a tuned circuit under examination.

Care must be taken to avoid mistakes in the dip because of this coupling loop; also the amount of the dip will not be as great as though coupling were made to the main coil. However the link enables one to leave "The Quizmaster" at a suitable spot on the wavelength instead of holding it by hand.



CH.—Rola 6 h.y. choke, 430 ohms.
Switch (S1, S2, S3, S4, S5)—Five pole, three position four bank non-short-
ing between contacts.

In construction use a cabinet with a hinged lid and arrange the coil so that coupling can be made to it through the open lid to take care of those few odd occasions when the link does not give sufficient dip.

It is obvious that if "The Quizmaster" has been calibrated in terms of frequency, then the frequency of any resonant circuit within its range can be determined.

On the other hand, if one cares to go to the trouble "The Quizmaster" can also be calibrated in terms of capacity and inductance. This is done firstly by using a fixed condenser of known value at the end of the transmission line and placing across it an inductance, then determining the resonant frequency of the combination. From this the value of the inductance can be calculated and marked on the dial. Other coils are

substituted and the process repeated until calibration is complete. Then the process can be revised by using one of the now known values of inductance and substituting various values of capacity to obtain a capacity calibration.

In use, if it is desired to check the value of a condenser, the correct size of "standard inductor" is connected, the unknown condenser is also connected and the capacity read off the dial when the grid dip occurs.

The reverse procedure is used to find the value of an unknown inductance. This is the principle of many of the "inductance-capacity" checkers on the American radio service market. It must be realised that in many cases condensers can be checked in position in a receiver without disconnecting them.

The grid dip oscillator can be used to check aerial systems, but this must be done with discretion as, when so used, "The Quizmaster" is a small transmitter and needless QRM can be created.

PHONE MONITOR

The usual form of station phone monitor consists of a single diode and a pair of headphones, but this system has its drawbacks which "The Quizmaster" removes. Due to the audio amplifier, the coupling to the transmitter is not so critical and a volume control is a convenient method of controlling the volume. In this circuit the meter is in the diode circuit and the coupling to the transmitter should be arranged to give a reasonable deflection on the meter.

During modulation with normal a.m. methods, no movement of this meter should be noticeable. If there is, it will indicate carrier shift which is very undesirable. Carrier shift can be caused by many things, but the two most common causes are over-modulation and poor power supply regulation.

It is not claimed that this monitor will show up all phone faults—hum may not show up due to the poor low frequency response of most headphones, but it will be found more than adequate for the majority of phone monitoring systems, particularly if you have a good recording system to play back to yourself.

FIELD INTENSITY METER

As a field strength meter a small vertical or other aerial is connected to the front panel terminal and the tuned circuit tuned to resonance at the operating frequency. "The Quizmaster" is set up some distance away from the transmitting aerial, and with the transmitter off, the "set zero" knob is adjusted for "0" reading on meter. With the transmitter on, "The Quizmaster" is tuned in exactly and if the meter pointer is hard over, the pick-up aerial is reduced until a desirable reading is obtained. Then without altering "The Quizmaster" or its aerial in any way, any alterations to the main aerial, feeders, coupling and transmitter adjustments will be shown on the meter.

The meter may be calibrated in the following manner. The meter is firstly adjusted to read exactly zero, then the

transmitter is turned on and the pick-up aerial is adjusted to give exactly full scale deflection on the meter, making sure "The Quizmaster" is properly tuned to resonance. Next reduce the power input to the transmitter by exactly half and note "The Quizmaster's" reading. This represents a reduction in signal strength of 3 db. Again reduce power input by half and read the meter. This is another reduction of 3 db or a total of 6 db from full scale reading. The process can be repeated as far as desired.

Alternative calibration can be made by setting the transmitter on one-quarter power and adjusting "The Quizmaster" pick-up aerial to give half scale reading. If then power is doubled, the new meter reading will be + 3 db, and if again doubled it will then be + 6 db. Likewise powers below quarter power can be used to get drops in strength. Of course in the first case if you want to read + or — against half scale, it's only a matter of labelling the meter case correctly.

It must be remembered that this calibration is arbitrary. If you take the meter along to a friend's shack and he uses different power or a different aerial or you use a different pick-up aerial, you may get more or less indication on the meter, but if you adjust the pick-up aerial so you get full scale deflection irrespective of power, then the meter will read correctly in decibels change. The meter cannot be calibrated in absolute units of field strength, but only

in change in relative strengths and after all, that's what Hams are most interested in with aerial systems.

In conclusion, "The Quizmaster" is one instrument that remains "put" for its uses are legion and this article merely covers a brief outline of its most important uses towards better Ham Radio.

APPENDIX

The 20 watt resistor in the h.t. B plus line is adjusted so that with either 6SN7 switched in, the current flowing in the VR150/30 is between 25 and 30 Ma, but not over 30 Ma. When the 6V6G is switched in the VR150/30's current will drop to about 5 Ma. The voltage at the output of the VR150/30 will remain at 150 volts.

Due to changes in input impedance between the different circuits, the frequency calibration of the grid dip oscillator will not hold for the other two functions.

The grid dip circuit can also be used as a wavemeter if a switch is arranged to remove the h.t. from the 6V6G, but the field strength position is much more satisfactory.

Standard Inductor No. 1: One open turn of 1/32" thick brass, 2" diameter by 1" wide. This is tightly coupled to the two-turn coupling coil on the end of the co-ax cable.

Standard Inductor No. 2: 4½ turns of 16 gauge B. & S. enamelled wire, 2" diameter tightly coupled to the co-ax coupling loop.

If these are to be regularly used, it is recommended that each be made up with its own co-ax cable, otherwise variation in coupling can cause serious erroneous readings.

Connection to condenser under test is via short pieces of brass which must make good fitting to the condenser being tested.

COIL DATA

No. 1—210 turns No. 32 B. & S. enamelled wire close wound on 1½" diameter. Coupling coil, 30 turns, same wire at earthed end of main coil—1 millihenry, 500 to 1000 Kc. approx.

No. 2—70 turns No. 32 B. & S. enamelled wire close wound on 1½" diameter. Coupling coil, 7 turns, same wire at earthed end of main coil—200 microhenries, 1 to 2.5 Mc. approx.

No. 3—38 turns No. 20 B. & S. enamelled wire close wound on 1½" diameter. Coupling coil, 4 turns, close wound at earthed end of main coil—40 microhenries, 2.5 to 5 Mc. approx.

No. 4—14½ turns No. 20 B. & S. enamelled wire close wound on 1½" diameter. Coupling coil 2 turns of same wire close wound at earthed end of main coil—10 microhenries, 5-10 Mc. approx.

No. 5—8 turns No. 16 B. & S. enamelled wire close wound on 1½" diameter. Coupling coil, 2 turns, same wire close wound at earthed end of main coil—2.5 microhenries, 10 to 20 Mc. approx.

Note.—Coils Nos. 1 and 2 are mainly for inductance and capacity checking.

USING TYPE 19 GENEMOTOR FOR 12 VOLT D.C. OPERATION

The above unit has been operating satisfactorily for the last three years and therefore output ratings and modifications carried out here may be of interest.

The unit is compound wound and needs no starter mechanism. The ratings of the two output windings as given on the name plate are correct with 14 volts at the input terminals, viz.: 275 volts (110 Ma.) and 500 volts (50 Ma.). At 12 volts, these drop to 250 and 450 volts respectively. The 250 volt section is adequately filtered for supplying a v.f.o. and low power stages.

The modifications carried out were to remove switch, input and output sockets, and associated wiring, together with the r.f. choke in the negative input lead. Two heavy terminals were fitted in place of the sockets on the front of the case. The negative terminal grounded to case and connected to negative input brushholder by a heavy lead. The positive terminal connects to the Series Field lead through the r.f. choke. Do not connect direct to the brushholder.

Holes may also be cut in the case to allow easy access to the grease nipples on the bearing housings.


On the output side the negative 250 volt remains as originally connected (to ground). The negative brushholder of the 500 volt winding is connected direct to the positive brushholder of the 250 volt winding, thus placing the two windings in series.

The output voltages are approximately 250 volts and 650 volts on load, with the input current running between 12 and 14 amperes.

This unit is supplying a five stage rig including v.f.o., with an input to the final 807 of 45 watts on c.w. The final voltage (600v.) varies less than 20 volts between key-up and key down. How-

ever, to obtain good regulation, the input leads must be as short as possible and heavy—not less than 7/036". At this station, the genemotors are placed as close to the batteries as possible; an automotive horn relay being used to remote control the Type 19.

—J. M. FARRER, VK3DP.



RED LINE

TRANSFORMERS

KITS for all classes of Electronic Equipment

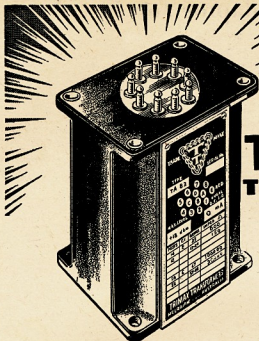
Precision in Design and Construction.

Specialists in design and manufacture of Communication Equipment, Industrial Transformers and Chokes, and Fluorescent Lighting Equipment.

RED LINE EQUIPMENT PTY. LTD.

City Office: 157 Elizabeth St., Melb. MU 6895.
Workshop: 2 Coates Lane, Melb. Central 4773.

DISTRIBUTORS: S.A.—Gerard & Goodman Ltd. N.S.W.—United Radio Distributors Pty. Ltd.
 Qld.—B. Martin Pty. Ltd. A. E. Harrold. Vic.—All Leading Wholesalers.



TRIMAX TRANSFORMERS

Every Transformer looks to be simply coils of wire on a core, but the beauty of Trimax Transformers is more than skin deep! Long experience and high standards of technical ability ensure that the unseen parts of your Trimax Transformers will prove their reliability in every test.

TRIMAX TRANSFORMERS

Cliff and Bunting Pty. Ltd.

CHARLES STREET, NORTH COBURG, MELB., VIC.

Q'LAND:
Chandlers Pty. Ltd.

N.S.W.:
Radio Equipment Pty. Ltd.
John Martin Pty. Ltd.

TAS.:
W. G. Genders Pty. Ltd.

SOUTH AUS.:
A. G. Healing Ltd.
Gerard and Goodman Pty. Ltd.
Radio Eleo. Wholesalers Ltd.

WEST. AUS.:
Nicholson's Ltd.
Atkins (W.A.) Ltd.
Cariyo & Co. Ltd.

THE 'R & E' DIGEST OF ★ CIRCUITS

(AUSTRALIAN EDITION)

**ON
SALE
NOW**

Price 3/-

The "R. & E. Digest of Circuits" is something that no radio man, whether Serviceman, Ham, or Home Constructor, should be without.

VARIED SUBJECT MATTER.—Circuits will be found in the "Digest" for everything from the simplest Crystal Sets to Eight or Ten Valve Receivers, Oscilloscopes, Audio Amplifiers of varying costs and complexities, and other circuits of special interest to Amateur Transmitters.

BUY YOUR COPY NOW FROM YOUR LOCAL BOOKSELLER.

also obtainable at

McGill's Authorised Newsagency,
183-5 Elizabeth St., Melbourne, Victoria.

Swain & Co. Pty. Ltd.,
119-123 Pitt St., Sydney, New South Wales.

or direct
from

RADIO & ELECTRONICS (N.Z.) Ltd.

(Publishers — Incorporated in New Zealand)

AUSTRALIAN REG. OFFICE: 17 BOND STREET, SYDNEY, N.S.W.

Telephone: BU 3879 Representative: L. W. Cranch, A.M.I.R.E., M.W.I.A. Telegrams & Cables: "Cranlay," Sydney.



Converting ZB2 Homing Adaptor for 50 or 144 Mc.

50 Mc. Converter

The adaptor in its original state consists of three RF stages using 954 acorn tubes and a detector using another 954. The original frequency band is 234 to 258 Mc., and it should be noted that no oscillator or frequency changer is incorporated. It has been found, however, that it is relatively simple to change the wiring to provide two RF stages, a mixer, a mixer, and an oscillator, the output of

the converter being on 5 Mc. or on any desired frequency which the individual Ham may prefer. The circuit diagram of the finished converter given here-with should assist one in carrying out the modifications, which are listed, for ease in working.

1. Remove all surplus filament wiring and switch, and wire all filaments in parallel for 6.3v. operation. The adaptor was originally wired for 12 or 24v. and the switch was used to change over

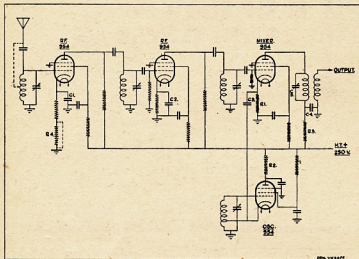
from one to the other.

2. Remove plugs Nos. 1 and 3 at rear of unit retaining No. 2 plug as power inlet if desired, and the co-ax connectors as antenna input and i.f. output.

3. Commencing with the r.f. stage, cut existing coil leaving $\frac{1}{2}$ " to $\frac{3}{4}$ " of wire in position for soldering to new coil. Short grid tap on coil to stator of antenna trimmer. Remove ceramic condenser from stator of antenna trimmer to earth. Take out 10,000 ohm resistor in cathode circuit, leaving 1,000 ohm resistor intact and connect to earth, the junction of these two resistors being originally connected to rear plug by plain white wire, also to be taken out. Add a 0.001 condenser from cathode to earth for additional by-passing, otherwise r.f. stages may oscillate because of the lower frequency.

4. The second r.f. stage remains intact with the exception of an additional 0.001 uF. condenser from cathode to earth and a new tuning coil.

5. Convert third r.f. stage to a mixer stage as follows: Remove plate coupling condenser and 30,000 ohm plate resistor. Remove cathode resistor and re-place with 100,000 ohm, which is the resistor removed from the first r.f. stage. Lift cathode by-pass condenser from earth. This condenser serves as a coupling condenser to oscillator (3.3 pF.).



In the schematic diagram the grid condenser and grid resistor to the 954 oscillator were inadvertently omitted, existing components retained.

C1, C2, C4—0.001 uF. condenser.

C3—3.3 pF., lifted from ground.

C5—3/30 pF. trimmer.

R1—100,000 ohm resistor.

R2, R3—30,000 ohm resistor.

R4—100,000 ohm resistor shorted to earth or removed.

Coils—See text.

Quite a number of ZB2 Homing Adaptors have been available on the Disposals market and in response to requests from members, we present herewith a collection of data on the above unit.

The first article we present with due acknowledgement to "Break In," and the latter article to Herb. Stevens, VK3JO.

6. Convert detector stage to an oscillator as follows: Grid circuit remains intact. Remove cathode resistor and condenser.

7. In rear compartment remove existing r.f. choke, strip off the old winding and re-wind with 40 turns of 28 s.w.g., or sufficient to reach output frequency should this be other than 5 Mc. After winding this coil, wind on four turns over the "cold" end, or more, depending on amount of coupling desired to provide connection for low impedance output. Replace what is now the i.f. transformer and connect the "hot" end to "B" positive through a 30,000 ohm resistor and by-pass to earth through a 0.001 uF. condenser. Place a 3-30 pF. trimmer across primary winding. One end of the output coil is earthed and the other end taken to "output" co-ax. connector. Note that "output" connector is next to plug No. 2.

8. The plate of the oscillator tube is connected to "B" positive through 30,000 ohm resistor.

9. Coils. As mentioned for first r.f. stage, all existing coils are clipped out leaving $\frac{1}{2}$ " to $\frac{3}{4}$ " of wire to take new coils.

DECEMBER SPECIALS!

- B/C Aer., RF, and Osc. Coils, 455 Kc. 2/6
- Amphenol Steatite Sockets, 5-pin and Octal 2/6
- Co-ax Connectors, Male and Female 2/6 complete
- Ribbon Microphone and Floor Stand £6/10/-
- Good Stocks of All Dry Batteries for Country Clients.

XMAS SPECIALS FOR JUNIOR!

- ★ Large Stock of English Minic Toys from 3/6 up
- ★ Austin A40 Model Electric Cars, remote steering, using two 935 Cells less Batts. 22/6
- ★ Electric Tug Boats, using 935 Cells less Batts. 22/6

These are the Goods for Junior.

MAIL ORDERS FOR COUNTRY HAMS

M. J. CROMPTON

18 HIGH STREET, GLEN IRIS, VIC.

Phone: WM 6153

R.f. coils, 11 turns.

Mixer, 11 turns.

Oscillator 14 turns (tapped at 4 turns from ground end).

All coils are close wound on $\frac{1}{2}$ " diameter former with No. 20 s.w.g. enamelled wire and slid off to leave a self supporting coil.

10. Solder the coils into place to the remaining wires of the original coils. The oscillator coil tap is connected to the cathode of the oscillator tube and also to the mixer tube cathode through the coupling condenser previously mentioned in instruction 5.

11. If a "grid dip" meter is available, all four circuits may now be lined up, r.f. stages and mixer to 50 Mc. and the oscillator to 45 Mc. (if the i.f. frequency is 5 Mc.), using the original air trimmers. At these frequencies the silvered slugs should be completely withdrawn from the coils. Note that as the slug is inserted into the coil, the inductance is lowered, and the frequency increased.

12. All screen circuits remain intact and are connected to "B" positive by the white wire with an orange stripe, and all plate circuits fed by the white wire with red stripe.

13. The original antenna coupling through the co-ax. connector and line to first r.f. stage remains, also the small ceramic condenser coupling to the grid, or tap in on coil to suit impedance of transmission line.

The coils, as specified, give full band spread from 50 to 54 Mc., but to increase the coverage a smaller diameter coil, having more turns, will be required. The converter is very sensitive and the signal to noise ratio leaves nothing to be desired.

144 Mc. Converter

At the outset it was desired to operate the ZB2 as a converter for 144 Mc., feeding into the Type 3 Mk. II. receiver as a receiving set-up for portable use. Conversion along the lines described above for 50 Mc. should prove equally as satisfactory (provided coils of appropriate size are substituted for those specified) as the conversion method to be described, for the only differences are that the oscillator tube used here is a 955 triode, the injection into the mixer stage is by means of the suppressor grid, and the interstage coupling has been modified slightly to give somewhat better performance.

Conversion of the two r.f. stages is as described above for 50 Mc. All heaters are wired for 6 volt operation, unnecessary by-pass condensers and resistors removed, cathode by-passes increased to 0.001 uF, screen by-passes (30 pF.) and resistors (0.2 meg.) remain, but the coupling between first and second r.f. stages and second r.f. and mixer stages is altered so that improved coupling is obtained. The grid resistors, 50,000 ohms, are removed, the grids connected directly to the tuned circuits, and the 5 pF. condensers, so gained, connected in parallel with the 5 pF. coupling condensers from the plates of the first and second r.f. stages to the tuned circuits. R.f. chokes were tried in place of the 30,000 ohm plate resistors, but as no improvement was noticed and as it was convenient to operate the unit

from a power supply giving a higher voltage than is recommended for these tubes, the resistors were replaced.

The reasons for the use of the 955 tube as oscillator are twofold: (a) One of the 954 tubes in the unit was found to be defect, and (b) A 955 reposited in the spare tubes' department. However, getting it going presented one or two difficulties. The circuit used is essentially the same as the above 954 oscillator, the plate of the 955 being fed through a 30,000 ohm resistor, by-passed to chassis with 250 pF. and the cathode tapped up from the "cold" end of the coil. The values of grid condenser and leak are 100 pF. and 20,000 ohms respectively.

Snag number one was in getting the tube to oscillate and was overcome by increasing the value of the plate by-pass from 30 pF. (existing screen by-pass for 954 tube) to 250 pF. as mentioned above. Number two snag was in keeping it oscillating! In order to check that oscillation was occurring (prior to the frequency being corrected) a meter, 0-1 Ma., was connected in series with the grid leak at its earthy end. However, removing the meter leads and connecting the grid leak to earth caused all other symptoms of oscillation to disappear. Putting an r.f. choke (from an I.F.F. unit) in series with the grid leak at its "hot" end and by-passing it with a 30 pF. condenser cured that one.

Injection of oscillator voltage into the suppressor grid of the 954 mixer is accomplished by disconnecting the suppressor grid from the chassis, inserting a 47,000 ohm resistor between these points and then connecting a 5 pF. condenser between the suppressor grid and the "hot" end of the oscillator coil. The plate circuit of the mixer tube is treated as described above for 50 Mc., but the cathode resistor is 10,000 ohms and is by-passed with 0.006 uF, this value being used because it was the first one to be found in the condenser department. Any good mica condenser whose reactance at the intermediate frequency is

quite low compared with the value of the cathode resistor, should be suitable.

The aerial coupling should be as tight as possible and the actual method will depend largely on the type of feed line used. In this instance, a "Lenfo" beam fed with 300 ohm twin lead is used, so the co-ax antenna lead was dispensed with and the 300 ohm lead, brought in through the top cover plate, is connected directly to a three-turn coil wound over the top of the three-turn grid coil. Some further experimental work here may be beneficial.

All coils are of three turns, approx. $\frac{1}{2}$ " diameter. The cathode tap for the oscillator, which is on the low frequency side of the signal frequency, being at one turn from the "cold" end of the coil. Some adjustments, trimming and concertina-ing of the coils was necessary to line-up and track all circuits, but presented no great difficulties and the hash from a superregen receiver gave a rough alignment, final adjustment of the trimmers being made with the aid of various signals on the band.

At this stage it was noticed that tuning was very sharp and it was necessary to adjust the Type 3 receiver in order to tune signals in at all. In an effort to overcome this, the existing drive arrangement for the tuning slugs was removed and a finely threaded $\frac{1}{8}$ " diam. rod arranged to drive them. Even though the push rod has been spring loaded, back lash is still apparent, but it is possible to tune a signal in without adjusting the tuning of the Type 3 receiver. The band is now covered by about 10 or 12 complete revolutions of the tuning knob, compared with about 230 degrees of rotation with the existing drive arrangement.

Results.—Signals which previously were smothered by hash of the superregen. are now audible and, if crystal controlled, quite readable. If from a mod. osc. they may, or may not, be readable depending on the degree of frequency shift under modulation and

(Continued on Page 14)

DURALUMIN TUBING FOR WIRELESS AERIALS

Stocks Now Available for Immediate Delivery

ALL DIAMETERS $\frac{1}{4}$ " TO $1\frac{1}{2}$ " IN WALL GAUGES 16-18-20

Price List on request.

GUNNERSSEN ALLEN METALS PTY. LTD.

67 YARRA BANK ROAD, SOUTH MELBOURNE

Phone MX 4621 (5 lines).

Telegrams: "Metals," Melbourne.

RESULTS OF 1949 VK-ZL DX CONTEST

The results of the VK-ZL DX Contest for 1949 are published herewith and although the number of logs submitted locally was not an adequate indication of the activity, the general feeling was that an extra good time was had by all concerned and mention is made of the fact that some very good work was done particularly on the l.f. end of the spectrum.

C.W. SECTION

The winner of the Open Section for c.w. operation was ZLIMB with a terrific total of 152,847 points in 81 countries, a truly magnificent effort and our congratulations go to him for his effort.

VK2EO made a welcome re-appearance in this Contest and tops the VK end of the scores by a big margin; other State winners were VK3KK, VK4RC, VK5FH, VK6RU, and VK7KB, congratulations to one and all.

Open Section

ZLIMB	152847	VK4RC	24912
VK2EO	130248	VK7JB	22032
VK2DG	95460	VK3DQ	20664
VK2ZC	85640	VK3JI	18093
VK2RA	83148	VK5OU	17346
VK2TF	69135	ZL3AB	11088
VK5FH	62784	VK3PG	9321
VK2JX	62634	VK3ABA	8370
VK3KK	57408	VK5AF	7080
VK6RU	50130	VK3UM	6968
VK3JF	50187	VK5KO	4686
VK3FH	42132	ZL1QW	3180
VK3XQ	36670	VK2IC	2106
ZLIMQ	28776	VK3TX	1008
VK5RX	28204	VK3EG	1005

14 Mc. Section

VK2DG easily proved the best on the 14 Mc. band and his entry of 430 QSOs in 74 countries for the Contest period was excellent—total 95,460 points. Conditions on this band were good for most of the time but were marred by intermittent bursts of bad key clicks from leading ZL stations which, aided by fortunate skip effect, were not sufficiently prolonged to involve disqualification. Local stations were not exempt from this by any means and it is about time that some of the consistent offenders in this respect took a look at their own signals.

VK2DG	95460	VK5RX	17115
ZLIMB	80808	VK3DQ	14312
VK2TF	69135	ZLIMQ	13284
ZL1DV	48216	ZL1BR	11178
VK2ZC	45708	VK4TY	11136
VK7KB	42000	ZL3AB	9360
VK2RA	41748	VK5FM	8502
VK5FH	33462	VK7LJ	7800
VK6DX	28204	VK5OU	7650
VK3KK	24948	VK5AF	7080
VK2JX	22758	ZL1IG	3960
VK2OA	21456	VK3YF	2983
VK7JB	19440	VK2IC	2106
VK3PL	19320	ZL1QW	1848
VK5BO	19320	ZL3CP	1620
VK3JI	18093	VK5KO	1479
VK3YD	17205	VK3TX	1008

28 Mc. Section

From a VK point of view the 28 Mc. conditions were good over the first half but fairly poor on the latter end. This

did not seem to disturb VK4AP who netted 18792 points in easy style, thus winning the ten metre c.w. section. There was little activity on the 11 metre band.

VK4AP	18792	VK3XK	1365
VK5AE	16416	VK2RA	1068
VK3NM	9782	ZL1MQ	804
VK3HT	6972	VK7JB	720
VK2AHM	4914	VK2GW	384
ZL1MB	3289	VK7KB	357
VK2JX	3120	VK5OU	231
VK2ZC	2040	ZL1QW	162
VK5KO	1479	ZL3AB	81

27 Mc. Section

VK2XA	12
VK2JX	3
VK3EG	3

7 Mc. Section

The 7 Mc. band was wide open for the Hams who wanted to take advantage of it with the result that VK2GW, working here (and on 28 Mc.), had by far the best results of any VK-ZL stations and managed 70 QSOs in 18 countries, and this was good going OM. Congrats!

VK2GW	3780	VK5OU	792
VK5KO	1632	VK2ZC	750
VK3XK	1485	ZL1MB	759
ZL4GA	1470	VK3FA	693
VK2RA	1296	ZL1MQ	528
VK2JX	1260	VK4XJ	231

3.5 Mc. Section

VK5KO takes the cake for his 80 metre work scoring 96 points with six Europeans and two Ws. and was the only log received. The old reliable VK2RA worked DL1FF on 3.5 Mc., but did not submit it as a log.

Check logs for the c.w. section were received from VK4RF, VK2PV, VK2JQ, VK3ASB, and ZL3GR.

OVERSEAS C.W. SECTION

The following are the results for overseas stations for the bands and/or open sections for which they were entered.

14 Mc. Section

W1RY	4080	OE1AD	1500
W1BH	1950	OE3CC	870
W1APA	1224	OE3AR	480
W2AIS	3968	OE1KR	144
W3OCU	3090	F4BDA	1458
W3ADZ	1210	VU2MA	60
W3KQD	750	DL1FF	3600
W3CGS	480	DL1XS	1188
W3NCF	468	DL1EN	756
W4LZF	1026	DL1TS	744
W5JD	2130	DL1DA	594
W5PKF	1080	DL1FI	462
W5JUF	336	DL1EV	135
W6AM	1344	G6XN	3480
W9AEH	4950	G8KP	1512
W9WEN	936	G5TL	528
W9CUI	1053	GWSL	3270
W9QLW	63	GMBRV	420
VE3AMK	408	G14RY	300
Z5SU	504	SM5LL	108
F9BO	1440	SM5TQ	27
F9DW	408	SM3FY	45
F9OL	45	PAOZL	1134
OE1CD	3000	KP4CC	2220

28 Mc. Section

W1RY	306	Z5SU	1152
W4LZF	234	F9DW	12
W4EEO	60	OE1CD	192
W5PKF	231	OE1AD	72
W6YC	525	OE3CC	18
W4JFC	420	DL1FF	450
W9AEH	945	G8KP	360
W9WEN	12	GW5SL	156

7 Mc. Section

W1RY	108	Z5SU	72
W5PKF	432	DL1FF	96
W9AEH	378		

3.5 Mc. Section

DL1FF	18	DL1YA	3
-------	----	-------	---

Open Section

W1RY	9720	DL1EI	486
W2AIS	3969	DL1GU	210
W2EMU	1950	DL1FZ	18
W2EQS	513	G5YV	7056
W3ARK	3120	G8KP	3360
W4KVX	5559	GW5SL	5124
W4LZF	2295	G14RY	300
W4CYC	1755	SM5WL	2730
W4DRK	234	SM3QY	1080
W5PKF	5184	SM5IZ	672
W5KC	3468	PAOZL	1134
W5JD	2130	PAOBL	270
W6AM	1344	PAOQF	224
W6GPB	1131	KP4KD	2730
W8OCA	2820	KP4JE	96
W8DAE	696	OK3AL	690
W8PM	324	OK2MA	567
W9AEH	16575	OK1KY	504
W9WEN	1190	OK1XQ	210
VE3AMK	408	OK1DL	180
VE3ACS	96	OK1GT	36
VE1CU	63	ON4AZ	1110
Z5SU	4446	V51DZ	5952
F9BO	1440	IKN	3015
KB1J	630	KHBJ	4920
F9DW	530	CT3AV	48
OE1CD	4872	TF3ZM	18
OE1AD	2262	4X4RE	693
OE3CC	1152	3X3CS	1080
F4BDA	1458	LA7Y	2970
VU2MA	60	LA2B	600
VPIAA	720	LA6B	483
DL1FF	10512	VO6EP	200
DL1FK	5616	OA4J	3600
DL1KB	4176	OZ3FL	3600
DL1DX	3285	ZS6BJ	120
DL3DU	1590		

Check logs were received from: G3DVM, G3HK, G6CJ, G8PV, G8LN, VP9G, VE3JJ, PA0UV, SM5HH, OK1BM, W1BOD, W1AB, W4PN, WB0VQ, W6NNV, and W8HA.

PHONE SECTION

Open Section

ZL4HP	47616	ZLIMQ	9804
ZL3HC	41760	VK2AMV	4698
VK4KS	38979	VK5LC	1035
VK6KW	15369		

14 Mc. Section

VK4KS	38979	VK6KW	5022
VK3IG	26790	ZLIMQ	4500
VK2US	25704	VK2WD	1050
ZL3HC	17820	VK3MX	297
ZL4HP	12969		

28 Mc. Section

VK5AS	21150	VK6RW	2820
ZL4HP	10875	VK5LC	1035
ZL3HC	4950	ZL1MQ	900
VK6HL	4536		

50 Mc. Section

ZL1MQ was the only station to send in a log for 50 Mc. where he made contact with KH6PP—a fine effort—scoring 3 points.

OVERSEAS PHONE SECTION

Overseas stations have forwarded the following logs:—

	14 Mc.	28 Mc.	Open
PK4KS	108	1458	
PK3WH		1431	
VE3AMK	18		3042
ZS5DS		30	
PY2CK	1140		
F8BO	483		
DL1FK		1656	
W7KK		163	
W4EEO		72	
G6XN		1539	
OQ5BA		24	
CX2CO		162	
VS1DZ		1485	
OK1HI		54	
ON4AZ	12		

RECEIVING SECTION

Phone and C.W.

In both the number of local and overseas entrants there would seem to be a marked lack of entries. So small in fact that there is doubt that this section is worth persevering with.

VK-ZL Section

BERS195, Eric Trebilcock, 184 Osborne Street, Williamstown, W.16, Victoria	137808
M. Phillips, Box 33 Warkworth, North Auckland, N.Z.	5460
F. H. Price, 74 Cleaver St., West Perth	3469
A. Moore, 18 Bourne St., New Farm, Brisbane	606

Overseas Section

OE-196, Richard Payer, P.O. Box Knittelfeld, Austria (QRA as from entry)	2304
OE-059	2094
OE-323	849
OE-314	672
DEM-1687	2685
HB9RSE	66
OK1-1647	465
BRS15822	3888
G. Hoffmann, Frankfurt-Hoechst, Emmerich Josef Str., Germany	6783

OUR FRONT COVER

Pictured on the front cover is the new transmitter at VK3WI. The background is provided by a photograph of 2CM's transmitter of 25 years ago.

The new VK3WI transmitter as pictured consists: the two lower panels are the main 1,200 volt h.t. supply with the voltmeter in the centre of the top panel. The next panel is the 600 volt minor h.t. supply, bias and filament supply.

The fourth panel contains the relay switching with the control buttons for local control of the transmitter. In the centre of the panel is the minor h.t. voltmeter with the meter switches on either side.

Panel 5, 6, 7, and 8 are the separate finals for each band, the 80 metre final being number 5.

The v.f.o. output feeds via a co-ax line on 3.5 Mc. to an 807 amplifier which drives a pair of 834s in push pull on 80 metres.

When the control panel switch is thrown to 7 Mc., the r.f. from the 3.5 Mc. 807 is directed to the panel above where it is fed into an 807 doubler which in turn feeds a pair of 834s on that band. The same principle is used for the successively higher bands, 14 and 28 Mc.

From the operating desk, band changing is accomplished by simply throwing the appropriate toggle switch for the band required.

This photograph is, of course, only the r.f. section of the complete VK3WI, the audio equipment being housed in a smaller rack.

Unfortunately we were unable to obtain, in time, a description of Charles MacLurcan's (2CM) transmitter, no doubt that will be forthcoming for a future issue.

The Victorian Division wish to express their appreciation to Phillips Electrical Industries of Australia Pty. Ltd. for their generous gesture in allowing use of their space on the front cover.

14th B.E.R.U. CONTESTS, 1951

Dates.—Phone: 1700 G.M.T. February 3 to 1700 G.M.T. February 4, 1951. C.W.: 1700 G.M.T. February 24 to 1700 G.M.T. February 25, and 1700 G.M.T. March 3 to 1700 G.M.T. March 4, 1951. Phone and C.W. have Senior (full licensed power); C.W. also has Junior (25 watts maximum).

Bands.—Phone: 14 and 28 Mc. only; a.m. or n.f.m. as permitted. C.W.: 3.5, 7, 14, and 28 Mc.; T9 only.

Open to licensed British subjects in British Commonwealth and British Occupation Forces, being fully paid up members of a recognised Commonwealth Society.

Call.—"CQ BERU" and work Commonwealth Stations. Exchange five- or six-figure serials: RST or RS plus three figure number starting between 001 and 400, and increasing by one each QSO.

Scoring.—Commonwealth is divided into 20 zones as below. Fifteen points for first QSO each zone, fourteen for second, thirteen for third, etc., and one point for fifteenth and further QSOs. Scoring system repeats for each zone and for each band. No QSO with own zone.

Entries.—In form shown appended, with declaration (on sheet 1) and zone score analysis (sheet 2). Paper size, Quarto (8 x 10) or Foolscap (8 x 13), Logs in time order.

Post to R.S.G.B., New Ruskin House, Little Russell Street, London, W.C.1, not later than February 12 (phone), or March 12 (c.w.) to be received by June 4, 1951.

Zones:—

- 1—AP, VU2, 4, 5, V87.
- 2—G, GC, GD, GI, GM, GW.
- 3—DL2, MB9.
- 4—HD, HF, HS, MT, ZB.
- 5—MI, ST.
- 6—VE1, 2.
- 7—VE3.
- 8—VE4, 5, 6.
- 9—VE7, 8.
- 10—VK2, 3.
- 11—VK4, 7.
- 12—VK5, 6.
- 13—VK9, VR4.
- 14—VO.
- 15—VP1, 3, 5, 7, 9.
- 16—VP2, 4, 6.
- 17—VPR, VK1.
- 18—VQ1, 3, 4, 5, ZD6.
- 19—VQ2, ZE.
- 20—VQ8, 9, ZC2.
- 21—VS1, 2, 3, 5, 6, ZK, ZM.
- 22—VS1, 2, 4, 5.
- 23—VS6.
- 24—VSR, MP4.
- 25—ZD1, 2, 3, 4, 7, 8, 9.
- 26—ZL.
- 27—ZL1, 2, 3.
- 28—ZS4 to 9.

All logs will be acknowledged on receipt. Check logs however small will be gratefully received.

ENTRY, SHEET 1—

B.E.R.U. Contest 1951.....Section
Name (block letters).....Call.....
Input power to final stage.....Watts
Aerial Systems.....
(Other station details may be given.)

Declaration—I hereby certify that my station was operated strictly in accordance with the rules and spirit of this Contest, and I agree that the decision of the Council of the R.S.G.B. shall be final in all cases of dispute.

Date.....Signed.....

Also, if not a member of R.S.G.B.:—
I hereby certify that at the time of the

Contest I was a fully paid-up member of.....
Date.....Signed.....

ENTRY, SHEET 2— Zone Analysis of Score

Zone	...Mc.		...Mc.		...Mc.	
	Contacts	Points	Contacts	Points	Contacts	Points
1—AP, VU2, 4, 5, V87						
2—Great Britain						
3—DL2, MB9						
4.....						
Totals						

Log Sheets

Date	G.M.T.	Band	Call Wkd.	Serial No. Sent	Serial No. Rcvd.	Pts. Clmd.	(Leave)

TIME MARCHES ON

This, the 25th Anniversary of incorporation of the W.I.A. in Victoria, marks another milestone in its history—but let us not forget "Old Timers" whose efforts 25 and more years ago laid the foundation of the present-day Wireless Institute of Australia, Victorian Division.

It was hoped to be able to give you a complete history of the W.I.A. over this period, but unfortunately many records cannot be found, consequently we have had to rely on information gleaned from those "Old Timers" who are still available. This article will tell, as far as possible the events leading up to, and those Amateurs who took part in, the incorporation of the Institute.

Unfortunately, many of those who took part in this great work have "passed on" but their work lives on.

As early as 1900, individual members of our Melbourne community had been laboriously carrying out experiments to disclose fundamental knowledge of the new science. Prominent in those days were Mr. Jenvey who made the first wireless tests with the S.S. "Ophir" when King George V., then Duke of York, visited Australia in 1901.

By 1908 quite a few were working with spark coils as the means of transmitting a signal and with coherers as the means of receiving it. The latter was usually constructed from glass tube, silver rod and filings from a threepenny piece. On reception of the signal the filings cohered, at the same time indi-

cating this fact by a suitable electric sign at the receiving station. An electric bell was usually pressed into service to give the coherer the necessary jar to decohere the filings and make them ready to receive another signal. Reception of each dash or dot involved that whole cycle of operations and placed real limitations on speed of reception. Brass rods—usually curtain rods—formed the basis of much of the apparatus to transmit and to receive radio waves more effectively.

By 1909 crystal detectors appeared instead of coherers. These were of galena or of iron pyrites and many were the favoured methods to get the best results from them—leading to the "cat's whisker" days still outstanding in the memory of anyone connected with radio. A list of names of Amateurs in those days would include Bill Jenvey, Alf Averd, Chas Whitelaw and Stan Hosken.

The next two years were very important to Amateurs for 1910 was marked by an unfortunate incident in the United States where signals from a ship in distress were jammed by an Amateur there. This affected the standing of Amateurs all over the world. However, in 1911, whilst the fight for existence was still on, another experimenter in the United States was the means of saving life at sea. He heard a ship's distress signal and was in fact the only one to do so—which re-established in some part the standing of Amateur Radio.

These years saw the formation of the Wireless Institute of Victoria. The driving force in Melbourne was Walter King Witt. A booklet, dated 1914 (a copy of which is held in the Melbourne Public Library) stated in its Preface that:

"This publication, the first of its kind for Australia, has been compiled from official and other authentic sources in order to fill a long felt want by wireless experimenters, and also to show the public to what extent has been the growth of wireless in Australia during the past three years. It is issued with the hope that it may promote both study and experiment in this most useful branch of science."

The booklet published by the Wireless Institute of Victoria listed office-bearers as under:—

President: Vernon Cole, Esq.
Vice-Presidents: W. King Witt, Esq., F. F. O'Shannessy, Esq.
Council: Douglas Harrison, Esq., Herman Lindow, Esq., John Strickland, Esq., W. Ednacott, Esq.
Hon. Corresponding Secretary: C. R. Dodson, Esq.
Hon. Organising Secretary: John Welch, Esq.
Hon. Treasurer: Angus McGregor, Esq.

Victorian Amateurs, under X call signs, numbered 193, with approximately a similar number for New South Wales, and a few in each of the other States.

Outbreak of the First World War gave Institute members an opportunity of showing the value of their training as Amateurs. Their technical knowledge

McGILL'S (Est. 1860)

OVERSEAS AND LOCAL POPULAR MAGAZINES

OBTAINABLE ON SUBSCRIPTION

AMERICAN . . .

Audio Engineering, £1/16/-; CQ, £1/16/-; Communications (now Television Engineering), £2/2/6; Electronics, £10/-/-; Popular Science, £1/16/-; Popular Mechanics, £2/0/9; QST, £2/9/6; Radio News, £2/5/9; Radio Electronics, £2/2/3; Science Digest, £1/18/6; Science and Mechanics, £1/13/-; U.S. Camera, £1/14/3.

ENGLISH and AUSTRALIAN . . .

Australian Radio World, 16/-; Amateur Radio, 9/-; Electronic Engineering, £1/12/6; Radio and Hobbies, 12/-; Shortwave Magazine, £1/7/6; Wireless World, £1/12/6; Wireless Engineer, £2.

LARGE RANGE OF RADIO BOOKS, STATIONERY AND NOVELS ON DISPLAY

Mail Orders by Return Post.

McGill's Authorised Newsagency

183-185 ELIZABETH STREET, MELBOURNE, C.1, VICTORIA.

(The G.P.O. is opposite)

Phones: M 1475-76-77

was far above the average marine operator (of the time) and after a brief course in code, these men were passed into transports and other vessels in war work.

Return to the peace of 1920 brought severe opposition by the Navy to the re-establishment of the Amateur here. With a supporter in W. M. Hughes, Amateurs at last managed to convince Commander Cresswell on the point. Licences were again issued, but at first were for receiving only. A fee of £2 was charged. This, however, was not without its compensations for it made Amateurs here concentrate thoroughly on the art of reception.

Subsequently, control passed from the Navy to the P.M.G.'s Department under whom Amateur Radio progressed remarkably well. The name of J. Malone, of the Department, must be mentioned here as a staunch supporter of the Amateur cause in these days. Active in reforming the Institute in those early post-war years was Victor Nightingall, ably supported by W. Conroy as Secretary, H. K. Love at that time asserted in arguments for the Amateur cause that they were fully qualified and could, with encouragement, be equipped to give and receive overseas signals—a statement which was subject to a great deal of ridicule from some. However, a committee was appointed to prosecute the idea. It consisted of H. K. Love as chairman, Max Howden, Ross Hull, E. K. Cox, with C. H. Philpott as Secretary. These communicated with the American Radio Amateur organisation, and a test was arranged for May 1923.

Publications setting forth Amateur Radio activities in Australia included the "Radio Experimenter"—the official organ of the Wireless Institute of Australia, and also of the Royal Australian Air Force Wireless Reserve. From these journals and from the daily press of the time, one reads of achievements of Amateurs in Victoria in that post-war period. To view Amateur Radio achievements in the right perspective, one should remember that much of the work was done on wave lengths discarded by commercial radio as of no value.

To return to the test arranged for May, 1923, a report by H. K. Love in "Radio Experimenter" told of organised listening watches all over Australia for the Americans. Many stations heard weak c.w., but no stations were logged. Then came May 10 when Ross Hull, 3JU, between 6.30 and 7.40 heard 6CGW calling TJ. On May 17, word perfect messages were received from 6JD and 6KA, 8,000 miles away. Names of Victorian Amateurs in the news in those years have a familiar ring today 3SW, S. Gadsden; 3GB, M. A. Glover; 3BQ, Max Howden; E. H. Cox, 3BD. With these one must mention the New South Wales Amateurs, 2CM, Charles MacLurean, and P. S. Nolan, 2YL. The four last mentioned were heard in England in 1925 by numerous stations working over the long path and using wave-lengths of 35 to 38 metres. Reception was reported excellent.

FIRST OVERSEAS CONTACT

In 1924, Max Howden, the first Australian Amateur to communicate with England and with America by morse

code, conducted a test with Mr. Simmonds, 2OD, of Gerrards Cross, London. This included a test with speech, but unfortunately it was spoiled because trouble with equipment intervened. However, Max Howden later distinguished himself as the first Australian to speak to England by radio—an achievement by an Amateur, before commercial radio entered the field.

It was in this very active period that the Wireless Institute of Australia held its first Convention. Its President in 1924 was H. K. Love; Vice-Presidents, Ross A. Hull and Max Howden; Hon. Secretary, T. P. Court; Organising Secretary, B. J. Masters; General Treasurer, C. Short. Affiliated clubs numbered 23, including those at Ballarat and Bendigo. Its meeting place was first at the rooms of Amalgamated Wireless of Australia. Later, meeting place changed to rooms in The Arcade, Prahran. Originally inhabited by pigeons for many years, the rooms were made shipshape by the boys who built their own furniture, cupboards and erected their masts complete with 12 feet spreaders. This antenna system was the sight of the town. Subsequently, a move was made to Kelvin Hall, Collins Place, Melbourne.

In 1924 the Victorian Division of the Wireless Institute held an exhibition of equipment, together with trade exhibits in the Melbourne Town Hall.

1925 was a significant year—a year of development. It was fitting that a great wireless exhibition was held in May of that year at Wirth's Olympia, Melbourne. Jerym B. Masters, on whose shoulders rested most of the organising of the exhibition, was a prominent member of the Institute whose President at the time was the late H. K. Love. The prize for best complete station was awarded to W. Gadsden, second prize to M. Chaffer. Kew Club won the prize in the club section. No doubt that equipment was liberally strewn with pancake coils, spiderweb coils, home-made grid leaks and with the new triode valve—articles on the four electrode valve appeared in 1924. One should mention in passing the name of P. H. McElroy, Doyen of the Retail Wireless trade in Victoria and a familiar name of Amateurs seeking material to build their own equipment in those days.

Clubs were numerous in those days. Glebe Radio Club distinguished itself by giving the first complete radio religious service in Australia. It was transmitted by the club from the Newtown Church. Records state that the rectifier used one dozen aspro bottles with aluminium and lead strips. Hawthorn, Prahran, Malvern, East Kew, St. Kilda were each represented by radio clubs of the period. It is in that year, also, we read in the daily press signs of things to come—"Amateurs opposed to wave length restrictions." In that year was held the Federal Conference of the Wireless Institute reported in the "Argus" on September 18. Mention of pirates is found in the news, also fading investigations and day and night effects. One must not let the year pass without listing Charles Whitelaw's transmission from Benalla to Pennsylvania—more Amateurs speak to England and to Holland. In that year also were

references to a seemingly incredible fact—that stronger signals were heard at greater distances and so began the piecing together of an interesting story, the results of which many take in a very matter of fact way today.

Whilst 1925 was regarded as a year of development, for much occurred in that year in technical progress, that year also marked the incorporation of the Victorian Division of the Wireless Institute of Australia as a trading body. This step calls to mind the name of J. Malone, at the time Chief Manager Telegraphs and Wireless in the Postmaster General's Department, and respected among Amateurs for his helpfulness and tolerance.

"Radio Experimenter" of that period records a letter from Mr. Malone advising Amateurs to "put their house in order"—advice which led to the incorporation of the Victorian Division of the Wireless Institute—the twenty-fifth anniversary of which we celebrate this year.

EDITORIAL

(Continued from Page 1)

Secondly, Amateur Radio provides a reservoir of trained personnel for defence purposes, and this must weigh heavily in the scales. These important factors should be sufficient to stimulate each Amateur to maintain his station in such a condition that he can put a satisfactory signal on the air in an emergency, despite continual alterations to equipment.

Thirdly, Amateur Radio has reason to be pleased with its contribution in radio research by pioneering short wave communication and in developing new techniques—antenna systems, selectivity devices, instruments and the like. There is every indication that it will continue to make similar contributions in the future.

But there is another aspect which brings us before the public eye more than these. Do we realise what a wonderfully powerful means we have in our hands to promote friendship and understanding between peoples—not only between different States of our Commonwealth and we need that most certainly—but also between people of other lands? But with that power goes a great responsibility—a responsibility to represent our own folk truly and well to other groups about the world. This to me seems to be the greatest task we have as Amateurs, and it is according to the extent to which we measure up to the standards by which others judge our conduct on the aim that the future of Amateur Radio will depend.

In the 25 years of Amateur Radio, marked by this number, we have much to be proud of. What can we make of the next 25 years to ensure that we justify and strengthen the confidence of the authorities which we at present enjoy? Victorian Division, in sharing in the pleasures of twenty-five years of achievement, likewise must share in that responsibility.

G. S. C. SEMMENS (VK3GS),
President, Victorian Division, W.I.A.

Western N.S.W. Amateur Emergency Activity

N.S.W. Amateurs during the last 18 months have been active in many emergencies when floodings in many parts of the State caused loss of life and tremendous damage. Due to the abnormal rains and the resultant saturated ground, run off is practically complete and rivers are still rising very rapidly after rain.

With the summer approaching the position should improve, but during late October the Lachlan River was again flooded and Radio Amateurs in the valley were active assisting to maintain communications in the area.

It was evident by Saturday, 21st October, following heavy rain, that a major flood would occur along the Lachlan. Accordingly Jim Corbin, VK2YC, was requested to contact the authorities and inform them that Amateurs in the Forbes district would be requesting permission to handle emergency traffic within the next 24 hours. The next day with flood waters rising, 300 subscribers to the Forbes telephony exchange had lost communication and the main business portion of the town, the District Hospital and the Police Inspector were out of contact.

After an emergency call, official P.M.G. station VNS was contacted on 7 Mc., and permission was granted to handle urgent telephone messages within the Forbes area. Local Amateurs were fully equipped with battery operated equipment as the switch gear in the local sub-station was under water, and a temporary one installed, it was considered that a power failure was imminent.

By this stage, Forbes was cut into three "islands" with Bill Kennedy, VK2BT, operating from one, Jim Carr, VK2JV, from the second—the town itself, where he had a runner to the P.O., John Meagher, VK2AMV, from the third, and Hugh Stitt, VK2WH, from outside the town area; all stations handling urgent traffic as required.

The Amateurs were advised that Army "Ducks" had been dispatched for relief in the area and as they had required assistance in the April floods, a continuous watch was manned on the Army frequency of 3380 Kc. They arrived in the small hours and Amateur

assistance was requested. The following morning, 23rd October, VK2AMV obtained permission from VK2AA, P.M.G. station, to co-operate with the Army, and from that date onwards until the departure of the "Ducks" on 28th October, Amateurs were continuously operating on 3380 Kc.

The Hams relayed messages where required and forwarded daily reports to Army H.Q. in Sydney. Later when the "Ducks" were in the Warren area, VK2WH again contacted them and passed further messages to Sydney.

Bands used by the Amateurs during the operation were 3.5, 7, 14 and 50 Mc., plus the Army frequency. Conditions

experienced during the period were extremely poor, influenced no doubt by the Aurora disturbance at the time. C.W. proved a blessing and with it quite a percentage of the traffic could not have been handled.

Amateurs who operated in the Forbes area extend their thanks to the many Amateurs in the State who assisted checking transmissions and band conditions, also the P.M.G. Department for the rapid permission given for operation and the help given by official stations.

These floods were the worst experienced in the history of the valley and the Forbes "Advocate" praised the work of the Radio Amateur.

● It might happen to you so be prepared.

*To The Victorian Division of The
Wireless Institute of Australia, we
extend our Congratulations on the
occasion of the 25th Anniversary of
its Inauguration.*

*To Members of the Wireless Institute and to
Amateurs everywhere, we extend
Hearty Seasonal Greetings.*



WE THANK ALL READERS OF THIS MAGAZINE FOR
THEIR CO-OPERATION THROUGHOUT THE YEAR
AND TRUST THAT WE MAY HAVE THE PRIVILEGE
OF SUPPLYING THEM, DURING 1951, THE HIGH
QUALITY COMPONENTS OF—

- EDDYSTONE
- BELLING & LEE
- LABGEAR LTD.
- BULGIN & CO.
- ERIE RESISTORS LTD.



WILLIAM WILLIS & CO. PTY. LTD.

428 BOURKE STREET, MELBOURNE, C.A.

Established Over 80 Years.

Phone: MU 2426

SUBSCRIPTIONS

● Please pay your Subscriptions
PROMPTLY when due. Failure to
do so may result in the loss of
valuable issues of "Amateur
Radio." High costs of production
make it necessary to limit the
number of extra copies printed
each month.

DX NOTES BY VK4QL

October produced an even thicker "Ion Curtain" than the previous month. Hard listening to hear the weak signals which did get through was a necessity.

All bands were effected, and to make matters worse, the noise level from static on 3.5 and 7 Mc. prevented listening or operating on those bands for days on end. One notable thing on 14 Mc. was the big changes that took place over a period of 24 hours, and an even bigger change in a week. For example, one week Europe came through until 5.30 p.m. The following week they were non-existent. 28 Mc. showed the same erratic behaviour. Plenty of Asians one night, the next, nil stocks. Europe has been non-existent on 14 Mc. round 6-7 a.m., but North and Central America, with the odd North African, were heard. One morning on a dead band, CR5AC was QSOed at 6.30 a.m. with S7 at both ends. He was just as surprised as I was at the strange conditions. FF8JC was again heard in the same circumstances.

Southern stations seemed to do reasonably well in the VK-ZL Contest, but it was not easy work. ZLIMB did not seem to be "bowling them over" with his usual ease.

F18BK was QSOed this month. Our QSO was his first on the air and he was going through the usual "jitters" we all go through, but he was not helped by the impatient VKs who kept jamming the QSO. All that I could get as far as

QTH is concerned is: "I am a French soldier in Indo-China, and will write you." He was not heard after the QSO, so probably went for a "quickie" to recover his composure.

The last week-end of the month produced a "black out" on 14 Mc. ZLs blocked the receiver, but the rest of the signals were very weak and were Oceanic only. The band remained dead on Sunday, except for a brief period round 4.30 p.m. to 5.30 p.m., when some very weak DX got through. Since then the noise level has been extremely high, even on 14 Mc. 7 Mc. has been useless, even the VKs being weak and a "hollow" effect on the signal.

I am indebted to 5JE for dope on 7 Mc. in Adelaide. He mainly operates this band, but the band fell away as the month progressed. However, HC2IH showed up on the band one night and by hooking him, 5JE completed his 7 Mc. W.A.C. Strange, but true, he worked FABBG at 4.30 p.m. on the last Sunday of the DX Contest. Contacts were made with VST and Europe also, so Adelaide produced a W.A.C. in the month for 5JE. He says very good signals came from the States between 5.30 and 7 p.m., then they faded out until 9 p.m., when they returned for a period of an hour. Nothing like that up here. I could not work or hear the South Africans the same as last month. Many thanks Ted. What about somebody else giving me some news, eh?

Listings for the month are not too bad, despite the poor conditions. They are: 28 Mc.—EQ3FM, XZ2EM, ZC6JM, KJ6AL, HS1SS; 14 Mc.—CR5AC (Box 38, Biscuit, Portuguese Guinea), F08AD, IS1AHK, HZ1KE, PK7NL, *38BD, VQ8CB, VP3FJ, VP2T1 (QSL via the R.S.G.B.), LA2B, ZB21 (QSL via Comayaguela, Honduras), K54AI, FK8AR (Vienna, Austria), ET9X (QSL via the A.R.R.L.), UF6AC, UF6AF, 4X4BR, 4X4CL, 3A2AB, FF8JC, F18BK, ET6AC, AC4RM. The last named caused quite some consternation on the band the night he appeared. As was expected, everything but the kitchen sink appeared on the band. A VK3 got the honor. He was being pressed for his QTH, when "foney" was transmitted by another VK3, adding that his signal was coming from the South. The signal from AC4RM was quite strong here, but having no beam, I could not check. Anyhow there was a smart exit from the band of the AC4.

QSLs received were C3MY, Formosa; VQ8CB, KV4AU, VRIC, ZB21, VP6SJ, SP1SJ, UL7AB, Y0SGH, YU3FLA.

Trev., 2NS, is bemusing the fact he cannot get a QSL from VP2, EA8 and AR8, but is still hoping. I am still trying to get a QSL from F08AC for VK2, VK3 and VK4 contacts.

The Propagation Bulletin for December does not give much hope for good hunting on 14 Mc., but 28 Mc. and 7 Mc. should be better than the month of November.

● The thought for the month: "Populate or perish." Use the lower frequency bands more, otherwise we will lose them. They are better for cross town chatter than 14 Mc. anyhow.

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

DECEMBER, 1950

Nine of the charts, prefaced by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefaced by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

The Perth charts are similar to those based on Canberra.

QUIZ

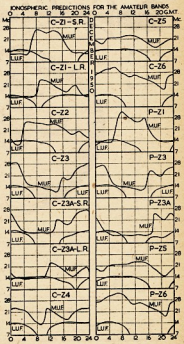
The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 1000 to 2000 hours G.M.T.?
2. Was the 14 Mc. band workable from 0600 to midnight G.M.T.?
3. Was the 28 Mc. band workable from 0200 to 0800 hours G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.

DX C.C. LISTING

PHONE			
Call	No. Ctrs.	Call	No. Ctrs.
VK3JZ	1 148	VR4PQ	18 114
VK3BZ	1 153	VK3AW	14 105
VK3BZ	3 141	VR4WJ	17 104
VK6KW	4 140	VK2ADT	13 102
VK6RU	2 138	VK2AHA	18 102
VK3RD	3 131	VK4WJ	16 101
VK3LN	11 125	VK3GG	18 100
VK4HR	12 122	VK3JG	8 100
VK4RS	9 121	VK3JE	7 100
CW			
Call	No. Ctrs.	Call	No. Ctrs.
VK3BZ	6 133	VK7LZ	17 112
VK3BZ	2 133	VK7LZ	21 108
VK3CN	1 131	VK4RO	13 107
VK4EL	9 150	VK2GW	16 107
VK3FH	15 150	VK3YD	27 105
VK3RL	5 143	VK3YD	30 105
VK3VW	4 140	VK5BO	33 105
VK3KB	10 138	VK5FH	31 105
VK3KX	28 136	VK5FH	25 104
VK4HR	8 131	VR4FJ	29 102
VK4RF	11 125	VK3APA	14 101
VK6RU	18 125	VK3NO	19 101
VK3KX	3 122	VK3CX	26 101
VK5RX	23 119	VK2OA	32 101
VK3UM	12 116	VK7LR	22 100
VK4DO	29 113	VK7LR	24 100
OPEN			
Call	No. Ctrs.	Call	No. Ctrs.
VK3BZ	4 170	VK5FL	26 116
VK6RU	3 170	VK2ADT	14 113
VK8RX	3 167	VK4RO	21 110
VK4HR	7 167	VK3BZ	34 110
VK3KX	3 161	VK4WJ	40 109
VK6KW	13 161	VK3ZG	25 108
VK3DI	2 160	VK7YL	11 106
VK3BZ	12 154	VK3AHM	30 106
VK4EL	10 150	VK3JG	31 105
VK4DO	15 140	VK3AWN	36 105
VK3MC	5 139	VK3VW	18 104
VK4RS	24 139	VK4UJ	27 104
VK3OP	19 137	VK2BZ	17 103
VK3DD	22 136	VK7KB	30 103
VK3AD	28 132	VK7KT	37 103
VK2HA	9 128	VK3HO	38 103
VK3LN	29 128	VK7KR	31 102
VK3LN	16 128	VK4TE	35 102
VK4FJ	32 120	VK3ACX	6 100
VK7LZ	23 116	VK3TG	39 100



ZB2 HOMING ADAPTOR

(Continued from Page 7)

the consequent distortion due to the sharpness of the Type 3 receiver. Noise level is quite low, so low in fact that it is a cause for doubt that the converter is working as well as it could be. Stability of the oscillator leaves quite a lot to be desired and the use of such a selective receiver means that these faults become readily apparent. When operating the ZB2 from the Type 3 power supply, the note from the 955 oscillator is about T4-5. R.f. chokes in the heater leads make no difference, but operating it from a separate power supply causes the note to improve to T6-7. Unfortunately, the design of the ZB2 does not allow much scope for experimentation here and so far no further improvement in the note has been possible, though the same tube in a series fed Hartley oscillator does produce a good clean note.

There is a continuous drift in frequency for 15 minutes or so after switch-

ing on and in addition every slight fluctuation in voltage causes the frequency to move. These effects may be overcome by the use of temperature co-efficient condensers and voltage regulator tubes, but to date these have not been tried. As it stands, it has achieved its main purpose—a more effective portable receiver than the superregen. detector.

Since writing the above, the output frequency of the mixer has been altered from 9.7 Mc. to 7 Mc. with a consequent increase in strength of both signals and noise. This confirms that the middle range of the Type 3 Receiver now in use has greater sensitivity than the highest range, and also serves to indicate the desirability of using a highly sensitive receiver in conjunction with the ZB2.

U.C.C. MOVE TO NEW BIGGER PREMISES

Moving an entire factory in three days without serious loss of production calls for first-class organisation. It has been achieved by United Capacitor Co. Pty. Limited.

The Company began on midday Friday, October 20, the move to its own modern factory premises situated at 433 Punchbowl Road, Enfield (LF 3511). The following Monday morning production re-commenced on a worthwhile scale.

The step is an indication of the progress which U.C.C. has made—progress which is very commendable in view of the Company having been formed just a little over twelve months ago by Tecnico Limited in conjunction with several overseas capacitor manufacturing companies.

Interviewed about the move, Mr. R. V. Bridekirk, Director of United Capacitor Co. Pty. Limited and of Tecnico Limited, dealt with the benefits which the new U.C.C. factory should bring to the radio, electrical, and electronic fields.

"This is an important step in the Company's plan to give the trade an even greater volume and range of capacitors," said Mr. Bridekirk. "The new premises will accommodate special machinery expected shortly from overseas, some of which will produce types of capacitors not previously made in this country. New techniques and processes are being introduced in the extra space now available," added Mr. Bridekirk.

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

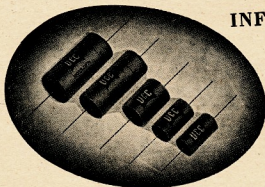


The Magazine Committee extends to all members, readers and advertisers a very Happy Xmas and a Bright New Year.

UCC

TUBULAR CAPACITORS

INFORMATION BULLETIN



SPECIFICATIONS

- Flash Test—4 times rated working voltage.
- Insulation Resistance—1,000 megohms per mfd. (min.).
- Capacity Tolerance up to .01 mfd. \pm 25%.
Above .01 mfd. \pm 20%.

U.C.C. wax-moulded paper tubular capacitors have very stable characteristics and conservative voltage ratings. They are moulded in high-melting-point synthetic wax designed for minimum moisture penetration. The capacitors are made from aluminium foil for low power factor. Extended life tests show little reduction in insulation resistance when operated at 140° F. at 95% relative humidity.

UNITED CAPACITOR CO. PTY. LIMITED

433 PUNCHBOWL ROAD, ENFIELD, NEW SOUTH WALES
Postal: Box 19, Enfield.

Phone: LF 3511



Associated with Tecnico Limited of Australia and Telegraph Condenser Co. Ltd., British Insulated Callender's Cables Ltd. and United Insulator Co. Ltd. of England

65/11P1

Compiled by J. K. RIDGWAY, VK3CR.

On Monday, 13th November, at 1220 hours, VK4BT was worked by VK3RR at McRae, but once again contact was broken by the sudden closing of the band after a couple of transmissions.

The highlight of October was the Northern Net Field Day held at Kulpa on the 29th. Ably organized by 5UX, the day was a great success. The portable gear was of excellent construction and a credit to the country boys present. Except for 5GP, 5KL and Joe McAllister, who went up from the city with v.h.f. gear, 5LR's 50 Mc. converter was the only v.h.f. gear seen amongst the Northern Net members. It was a field day for v.h.f. 5GP made contact with 5QR, 5HD and 5MK in Adelaide

6DW from Bruce Rock is also very consistent over the 150 mile path to Perth. During the end of October, his signals peaked to S7-8 at times. 6BO and 6GB worked Don under those conditions for three hours one evening. 6DW has his W.A.S. for six metres confirmed and is the third in VK. Fine work Don. When one considers that every Q80 Don has made has been DX and with no local

6HL has his mobile all band Tx and Rx working! 6G is well and it does a fine job on this band. Whilst on vacation down at Karrbank, Harry worked 6WGW in Albany (35 miles). 6GW is threatening to come back to Tx, but is very busy putting up a hefty tower at present. Many of the many other stations are stacked on it. George, 6AS finally found a lower frequency for the 815 and finished up with more than enough drive. Still has to push the three element beam a little higher, but by the time this is printed it should be OK. 6IR comes in with a new 100W P.P. 807s. 6LM can transmit on six now but needs a P-X or converter to complete the set-up. 6IG and 6JH are very quiet. In 6HW's case I think it's a boosting (or yachting) is a bigger attraction than six metres.

2YM brought his portable gear along to 2QZ's one afternoon, but couldn't raise a thing which doesn't sound very hopeful for the proposed use of this band here. At the V.H.F. Section meeting during the month, 2ABH demonstrated some simple converted i.f.f. units for beginners on the band and the conditions of the 144 Mc. contest were finally decided upon.

Mr. C. Jackson, in his lecture on U.H.F. touched on various problems associated with lighthouse tubes. Klystrons, and Magnetrons and the means adopted to produce oscillations at frequencies between 2,300 Mc. and 30,000 Mc. To illustrate his points, he presented two cavity resonator oscillators using a 2C4 tube, one efficient Klystron for 10,000 Mc. and an eight cavity split anode Magnetron for 10,000 Mc. As references for this work, he quoted Text Book of Radar, C.S.I.R. Aust.; Principle of Radar, M.I.T.; and Electronics, Feb. 1946, pages 3 to 7. After questions had been asked and answered, the meeting accorded a vote of thanks.

with acclamation to Mr. Jackson.

SAPP was unable to work outside the Shepparton area in spite of "A mighty lot of Oqs." SAKR and RAGD were left lamenting when TKB broke through and altered the beams went in his direction.

SAKR, SAKR, SAKR, some sections - st. SED, 84 QSOs; equal 2nd BEN and SRV, 30 QOs. Portable Section-1st, SAKR, 25 QSOs; 2nd, SNW, 27 QSOs; 3rd, 3FO, 21 QOs.

Acknowledgments to VKs 2QZ, 3JO, 5CK and 6AS for the above material.

to obtain an appropriate trophy for presentation to the outright winner when the results are ready for publication. Help us to help you to make this

Abstracts from Overseas Magazines

"RADIO AND TELEVISION NEWS," JUNE, 1950

- P. 40: "A Portable 40 Metre CW Station," H. C. Gould, W1KRU.—Regenerative receiver, two stage transmitter run from dry batteries.
- P. 43: "A 30 Watt 5F Amplifier for the Ham," H. D. Hooton, W3RPA.
- P. 43: "Simplified Ham TV Station, Part II," J. R. Popkin, W2LNP.—Wider spot area, mer. pickup amplifier, blanking and sound circuits.
- P. 62: "Mobile Antenna for 75 Metres," R. W. Jones, W6EGR.—Centre loaded whip. Test unit for resonance.
- P. 64: "New Applications for Crystal Diodes."—Germanium rectifiers used for: (i) Peak to peak voltage measurement; (ii) Voltage spot area generator; (iii) Harmonic attenuator; (iv) Voltage regulator for 2 volt supply; (v) Relaxation oscillator.
- P. 75: "Tan Ka to Set Me, Multivibrator," G. Dexter.—Dual ramp multivibrator (10 Kc. or 1 Mc.) locked to 100 Kc. crystal.

"CQ," JUNE, 1950

- P. 9: "The Latest Techniques for the Elimination of Ham TVI," P. S. Rand, W1DBM.
- P. 15: "A Flat-Powered VFO Rig for 10 Metre Mobile Operation," G. C. Voyles, W2TDL.—6AK5 VFO on 14 Mc. 6C4 doubler, 6AQ5 final, 6AQ5 modulator.
- P. 17: "The Air Force Interest in Sporadic E Ionization."—N. C. Gering.—Contains interesting series of maps showing the appearance, growth and drift of a number of Sporadic E "clouds."
- P. 20: "A Helical Hi-Pot," T. Nicholson, W6CKR.—An effective "compressed" antenna for the low frequency bands.
- P. 23: "A Flexible 150 Watt Transmitter," G. R. Ross, W8QUG.—6XK7 EDO, 6F5, 6F6 isolators, 6V6 buffer doubler, 6V6 or 6L6 doubler, 826 final.
- P. 27: "Modifying the BC469 for Tri-Vee 40 Metre CW," H. E. Brier, W2EJG.—Good hint on converting Command transmitter for Amateur use. Improved keying, parasitic debugging and harmonic suppression.

"QST," JULY, 1950

- P. 11: "An Accessory for C.W. Reception," G. Grammer, W1DF.—An audio limiter for saving the eardrums.
- P. 14: "All-Drive Arrays," W. M. Andrew, W3AM.—For those who are fed up with parasitic beams, this article should be just the thing.
- P. 18: "An All-Band Crystal-Controlled Exciter," A. A. Langley, W2CQG.—6AG7 oscillator, 6L6 buffer-doubler.
- P. 20: "Basic Operating Procedures," B. Goodman, W1DX, Part I, Radio Telegraphy.—Everyone can profit by reading this.
- P. 24: "Technical Topics: How to Visualize a Phone Signal,"—Sugar coated discussion on sidebands, modulation a.s.c. and other similar topics.
- P. 31: "Radiator Length and the Gamma Match."—Points out that the Gamma match can only give $\frac{1}{2}$ w.w.r. if the antenna is tuned to resonance. It appears that the Gamma match is now reactive, i.e., the usual formulae for element lengths apply.
- P. 34: "Coil Design for Link-Coupled Circuits," K. A. Pullen.—Simple method for determining proper circuit constants.
- P. 50: "More Effective Speech Amplification," T. W. Swofford, W5RQU.—Shaped frequency response plus a.g.c. compression.
- P. 56: "Hints and Kinks" (i) Combined cist and trap antenna. (ii) Non-aligning antenna. (iii) Crystal calibrator and r.f. indicator. (iv) Band-pass for the VPK680. (v) Tapping small coils. (vi) Improved keying for the VPK1 transmitter. (vii) Home-built air dielectric co-axial lines.

"CQ," JULY, 1950

- P. 13: "The Low Frequency Discone," M. Seybold, W2RY1.—Discone antenna cut for 11 Mc. Gives flat match to 52 ohm co-ax feed from 11 to over 66 Mc.
- P. 23: "Under-the-Dash Mobile Transmitter for 75 Metre CW Operation," O. H. Lowrey, W4WAB.—6C4 Pierce oscillator, 6AQ5 r.f. final, 6C4 speech amplifier, 6AQ5 modulator.
- P. 26: "The Secret Weapon," H. J. Hanson, W7MXL.—A 100 watt mobile transmitter-receiver in 7 x 7 x 14 inch case.
- P. 29: "Increasing the Versatility of the Collins 32V Transmitter," W. L. Orr, W6SAI.
- P. 33: "A Modulator for the Medium-Power Transmitter," M. P. Johnson.—40 watts of audio from class B 24G5.

"RADIO AND TELEVISION NEWS," JULY, 1950

- P. 43: "Oscilloscope for R.F.," G. Dexter.—Modulation indicator device SBF without any tuning.
- P. 45: "A V.T.V.M. for A.C.-D.C.-R.F.," R. P. Turner, K6AI.—Battery operated using 104 volt mobile tube and 148 diode rectifier.
- P. 46: "Simplified Ham TV Station, Part 3," J. R. Popkin, W2LNP.—Describes modulator,

crystal controlled 420 Mc. transmitter, power supplies and receiver.

P. 53: "The 'Sumodget' Transmitter," M. E. Lowe, W6NBF.—Super modulation transmitter using two 818s in final.

P. 57: "An Inexpensive Grid Dip Oscillator," W. Y. Younger, W2LW.—1.44 Mc. whip, untapped coils. Use electron eye tube as indicator.

"QST," AUGUST, 1950

- P. 11: "Better Results on 420 Mc.," E. P. Tilton, W1HDD.—Receiver and transmitter ideas for the u.h.f. experimenter.
- P. 16: "Basic Operating Procedure," E. P. Tilton, W1HDD.—How to use the Teleprompter.
- P. 19: "A Tunable 75 Metre Mobile Antenna," C. Huff, W2AHS.—Inductive loading coil in centre of 8 ft. whip.
- P. 24: "A Two-Control V.F.O. Rig with Bandpass Exciter, Part I," C. V. Chambers, W1WEQ.—120 watts to 829K, 1 m. or c.w. 80 to 100 metres. Many ideas for those who like to QSY and jump bands with the minimum of effort.
- P. 30: "A Two-Tube Crystal Controlled Converter for 20 Metres," C. L. Pauley, W6WFF.—6AK5 r.f., 6J6 mixer, harmonic crystal oscillator.
- P. 35: "A Mobile Converter for 144 Mc.," P. S. Rand, W1DHM.—6AK5 r.f., 6J6 mixer-oscillator.
- P. 40: "Hints and Kinks" (i) Adapting the co-ax s.w.r. meter to 300 ohm twin lead. (ii) Audio filter connection. (iii) Home-made insulators from salvaged medical tubing.
- P. 46: "T.V.I. Tips" (i) High pass filters. (ii) A co-ax filter.

"CQ," AUGUST, 1950

- P. 11: "How to Neutralize Your Single Ended Tetra-Final," W. B. Bruene, W0TTC.—Capacity bridge neutralization for 807, 812, etc., plus a special trick for 812s by using the beam forming plates for neutralizing. Same idea can be used to neutralize receiver I.F. stages if they want to take off.
- P. 14: "Gain Without Headaches," C. K. Farr.—Uses of the Wallman cascade circuit.
- P. 15: "W5EQG Builds Another Beam," H. S. Brier, W5EQG.—Three element 20 metre and four element 10 metre beams interlaced.
- P. 20: "CQ Tests the Lyco Transmitter," A. E. Hayes, W2BYF.—Comments on extremely 25 watt transmitter, 6AG7 v.f.o., 6AG7 buffer, 807 final, band switched 160 to 100 metres.
- P. 22: "Use Your 304T's," E. P. Bonner W5RCA.
- P. 24: "SCR274A Transmitter Modifications," J. N. Whitaker, W2EJG.—(i) alterations for making these popular disposals items more suitable for Amateur operation.
- P. 29: "Building a Non-Guyed Steel Tower," G. D. Johnson, W0TJ.
- P. 31: "Real Audio Selectivity Using Standard Parts," L. F. Fleming.—Three section LC filter using small power filter chokes.

"RADIO AND TELEVISION NEWS," AUGUST, 1950

- P. 20: "Radio Control of Model Boats," W. L. North, W1GER.—Very simple radio control equipment.
- P. 45: "A Simple Noise Limiter," R. P. Haviland.—1N34 and 0.5 meg. resistor connected across audio load resistor of the second detector.
- P. 47: "Voltage Regulation for Higher Filtrity," J. C. Goodier.—Good article on 2X regulator supply.
- P. 51: "A Compact Amateur Band Superhet," R. D. Zimmerman, W3ROY.—3.5 to 54 Mc. plug-in coils. Twin triode mixer, 1,600 Kc. i.f.
- P. 61: "Complete 30 Watt Ham Station," S. Johnson, W0LWY.—Transmitter 6L6 v.f.o., Receiver 6K5 mixer, 6SN7 regen. detector and audio.
- P. 65: "Home Built 2 Inch Oscilloscope," J. S. Anderson, W5UFE.—Usual simple c.r.c.

"CQ," SEPTEMBER, 1950

- P. 18: "Building and Using the Antennascope," W. M. Scherer, W2AEF.—The Antennascope can be used to determine antenna resistance and resonance, to match transmission lines for minimum s.w.r., to find receiver input impedance and other r.f. measurements. Consists of a simple resistance bridge and looks like an extremely valuable instrument round the shack.
- P. 19: "Push-Button Control Circuit," W. Waite, W6QDG, and G. Grandt, W8A1K.
- P. 20: "How to Build an Operating Console," C. A. West, W21YG.
- P. 24: "Coupling on Six," C. O. Bishop, W7HEA.—6J6 oscillator-mixer with 29-2 type input matching and 5 Mc. I.F. output.
- P. 27: "Pi Network Tank Circuits," E. W. Papenfuss, W5SYF, and E. L. Klippel, W5QSO.—The good old on the adjustment of pi networks.
- P. 34: "Four-Band Mobile Rig," H. Bumbaugh, W6RI.—Uses 815 final and 815 modulator, covers 80, 40, 20 and 10 metres.

"QST," SEPTEMBER, 1950

- P. 11: "Crystal Controlled Converters for V.H.F. Use," E. P. Tilton, W1HDD, and C. V. Chambers, W1WEQ.—Low noise converters for 10, 6 and 2 metres, using cascade circuit in push-out circuit.
- P. 17: "The Mountaineer—A Hiker's Portable," R. W. Vreeland, W0YBT.—Light weight dry battery 80 metre transmitter-receiver.
- P. 20: "Another Inductive Coupling System for Rotary Beams," R. E. Monahan, W6DHL.
- P. 25: "A Simple Voice-Operated Keyer for Automatic Break-In Operation," J. L. Flanagan, W1SJT.
- P. 29: "A Two-Control V.F.O. Rig with Bandpass Exciter, Part II," C. V. Chambers, W1WEQ.
- P. 34: "Safety and Commonsense in Transmitters," S. K. Bala, W0PZX.—Chassis construction with components mounted on panels. Panels hinged on rack opening forward to allow access from the front of the rack.
- P. 38: "A Dual Crystal Q5-er," R. A. Tilt, G3CMJ.—Better selectivity from a two-crystal filter.
- P. 40: "Working DX," B. Goodman, W1DX.
- P. 44: "Push-Button Power Control Circuits," V. W. Hansen, W6FUL.

Low Drift Crystals FOR AMATEUR BANDS

ACCURACY 0.02% OF
STATED FREQUENCY

3.5 Mc. and 7 Mc.

Mounted £2 0 0

Unmounted £2 10 0

12.5 and 14 Mc. Fundamental
Crystals, "Low Drift,"
Mounted only, £5.

Spot Frequency Crystals
Prices on Application.

Regrinds £1 0 0

THESE PRICES DO NOT
INCLUDE SALES TAX.

MAXWELL HOWDEN
15 CLAREMONT CRES.,
CANTERBURY, E.7,
VICTORIA

FEDERAL QSL, and DIVISIONAL NOTES



Federal President: W. R. GRONOW (VK3JG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President.—J. Corbin, VK3YC.
Secretary.—David H. Duff (VK3RO), Box 1734
G.P.O., Sydney.

Meeting Night—Fourth Friday of each month at
Science House, Corner Gloucester and Essex
Sts., Sydney.

Divisional Sub-Editor.—A. O. Pearce, VK2ARB,
151A Balmain Rd., Leichhardt, N.S.W.
Zone Correspondents: 44 Coast & Tablelands: J. M.
Retallack, VK2XO, Raleigh; Newcastle: H. Whyte,
VK2AHA, Vale St., Birmingham Gardens, Newcastle;
Coastlands & Lakes: H. Hawkins, VK2VIL, 27 Comfort Ave.,
Cessnock; Western: W. H. Skitt, VK2WH, Cumberland,
Forbes; South Coast and Southern: R. H. Bayner, VK3DO,
43 Pettit St., Yass; Western Suburbs: A. O. Pearce, VK2ARB, 151A
Balmain Rd., Leichhardt, Eastern Suburbs: B. R. Knox,
VK2NO, 40 Yanko Avenue, Waverley; North Sydney: D. Cuffe, VK2AM,
79 Military Rd., Mosman; St. George: J. A. Ackerman,
VK2ALQ, 82 Park Rd., Carling; South Sydney: V. H. Wilson, VK3VW, Cr. Wilson
St. and Marine Pde., Maroubra.

VICTORIA

President.—G. S. C. Semmens, VK3GS.
Secretary.—C. Dyer (VK3DY), 19 Collingrove Ave.,
Brighton (CA 6282).

Administrative Secretary.—Mrs. S. Mar, Law Court
Chambers, 191 Queen St., Melbourne, C.I.

Meeting Night—First Wednesday of each month at
the Radio School, Melbourne Technical College.

Zone Correspondents.—Western: C. Waring,
VK3Y, 12 Skene St., Stawell; South Western: K. O'Rourke,
VK3AKR, Kilgrew, Westmore; North Eastern: T. S. Tennant, 18 Harold
St., Shepparton; Far North Western: M. Fells,
101 Lemon Ave., Mildura; Eastern: H. O. Kelas,
VK3AHK, Timbambra; North Western: C. Case,
VK3ACU, Cumming Ave., Birchlip.

FEDERAL

F.E. DISCUSSIONS WITH P.M.G. DEPARTMENT

Federal Convention items from the 1950 Convention concerning the Postmaster-General's Department are listed herewith together with the results arising from discussions between Federal Executive and the Department.

Item 27: That Federal Executive approach the P.M.G.'s Department for permission to play back recorded 50 Mc. and higher transmissions on other bands. Result: The licence of any Amateur Station may, in the Amateur frequency bands of 50 Mc. and upwards, record and re-transmit transmissions from other stations, provided the station is operating in clear bands. The equipment so employed must be capable of producing recordings of high quality. Re-transmissions made at the request of an individual station be limited to a period of not exceeding five minutes in the aggregate in any one day.

Item 28: That representations be made to the P.M.G.'s Department for permission to record by modern techniques transmissions of Amateur Stations and play back over the air on frequencies to be laid down by the Department. Result: The Department agrees that the number of permits now issued in the various States to record and re-transmit the emissions from Amateur Wireless Stations operating in the Amateur frequency bands below 50 Mc. shall be increased to permit the issue of a number of permits up to 10 in New South Wales and Victoria, and 5 in each of the other States. Permits will be issued by each Superintendent to suit the members and non-members in the same proportion as the Amateur Advisory Committee personnel in the relevant State, but where it is found that insufficient non-W. members are present, the number concerned in each State desire permission to undertake recordings and re-transmissions of Amateur transmissions may be considered by the W.I.A. members. Institute nominees will be appointed by the Superintendent concerned after recommendation by the State body of the Institute.

Item 29: That the P.M.G.'s Department be approached for permission to transmit music on Type A3 stabilised emission for experimental purposes on sections of the 50 Mc. band and higher. Result: The Department was unable to accede to the request.

Item 31: That the P.M.G.'s Department be approached with a request that all licensees in the

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI—Sundays, 1100 hours EST, 7195 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI Intra-State working frequency, 7175 Kc.

VK3WI—Sundays, 1130 hours EST, simultaneously on 3580 and 7195 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7195 Kc., 14342 Kc., 524 Kc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI—Sundays, 1000 hours SAST, on 7195 Kc. Frequency checks are given by VK5DW by arrangement only on the 7 and 14 Mc. bands.

VK6WI—Sundays, 0930 hours WAST, on 7195 Kc. No frequency checks available.

VK7WI—Sundays at 1000 hours E.S.T. on 7195 Kc. No frequency checks are available.

Northern Territory be allotted the prefix VK8. Result: For reasons previously explained, this request was disallowed.

Item 32: That Federal Executive be asked to endeavour to speed up the allocation of the 21 Mc. band and view of the Department. Result: Interference on the 7 and 14 Mc. bands. Result: Pending implementation of the Atlantic City Frequency List, the Department is unable to take action requested.

Item 33: That Federal Executive approach the P.M.G.'s Department for permission to broadcast from the Institute stations, talks of a technical nature such as those given at monthly meetings. Result: As an extension of the existing approval is given for one of the weekly broadcasts in each month to include technical talks, the total duration of which shall not exceed 30 minutes.

Item 35: That the P.M.G.'s Department be approached to extend automatic permission for portable operation to the 21.28 Mc. band. Result: For the reasons explained to representatives, the Department could not agree. (The main reason arising from the discussion between Federal Executive and the Department was that the Department feel justified in knowing where and when a portable station is in operation should it be necessary for them to contact the station in the event of interference in commercial channels. Despite the fact that operators, under the regulations, must sign their call and location at least once every five minutes, the Department is unable to grant automatic permission for portable operation it would be difficult

W.I.A. ACTIVITIES CALENDAR

Dec. 2-3: Fourth All-European DX Competition, 1950-Phone.

Dec. 16-Jan. 1: Ross A. Wilson Memorial Trophy V.H.F. Contest.

Dec. 18: Motions for 21st Convention.

Dec. 16-Jan. 1: Ross A. Wilson Memorial Trophy V.H.F. Contest.

Jan. 19: Convention Motions due in to Federal Executive.

Jan. 28: W.I.A. Nat. Field Day Contest.

Jan. 31: Membership Roll of each Division due with F.E.

Feb. 3-4: B.E.R.U. Contest—Phone.

Feb. 24-25: B.E.R.U. Contest—C.W.

Feb. 28: Convention Per-Capita due with F.E.; end of Fiscal Year of Divisions.

March 3-4: B.E.R.U. Contest—C.W.

QUEENSLAND

President.—J. F. Pickles, VK4FF.
Secretary.—W. L. Stevens, VK4TB, Box 688J,
G.P.O., Brisbane.

Meeting Night—Third Friday in each month at the
I.L.K. Rooms, Wickham St., Valley.

Divisional Sub-Editor.—Clive J. Cooke, VK4OO,
Kuran Street, Chelmside, Brisbane.

SOUTH AUSTRALIA

President.—E. A. Barber, VK5MD.
Secretary.—G. M. Bowen, VK5XU, Box 1334K,
G.P.O., Adelaide.

Meeting Night—Second Tuesday of each month at
17 Wymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS,
483 Explanade, Henley Beach.

WESTERN AUSTRALIA

President.—R. W. S. Hugo, VK4WH.
Secretary.—W. E. Cooton, VK4GO, 7 Howard St.,
Perth.

Meeting Place—Padbury House, Cnr. St. George's
St. and St. Peter's St., Perth.

Meeting Night—Third Tuesday of each month.
Divisional Sub-Editor.—Alec A. Smith, VK8AS,
75 Weston St., Carlisle, Western Australia.

TASMANIA

President.—J. Brown, VK7BJ.
Secretary.—R. D. O'May, VK7OM, Box 371B,
G.P.O., Hobart.

Meeting Night—First Wednesday of each month at
the Photographic Society's Rooms, 163 Liverpool
St., Hobart.

Divisional Sub-Editor.—S. Excell (VK7SJ), 77 Mallett
Street, Hobart, Tasmania.

Northern Zone Correspondent.—R. H. Kilby, VK7RK,
3 Galvin Street, Launceston.

to police the bands where out-of-band operation or commercial interference may require them to do so.—Federal Secretary.)

Item 36: That representations be made to the P.M.G.'s Department for permission to operate transmitters under portable conditions without applying for a portable license, in any frequency band. Result: The Department was unable to accede to the request. (The reasons are in the terms of Item 35 above.)

Item 40: That approval be sought from the P.M.G.'s Department for the use of an identifying signal by Amateurs conducting emergency traffic. The signal to have the significance: "I am conducting emergency traffic; please do not cause interference," and the Federal Executive was instructed to give the signal wide publicity. Result: The Department raises no objection to the proposal. W.I.A. Executive to determine what it considers would be a suitable signal and to further discuss the matter with Chief Inspector (Wireless) before introducing the proposal. (Federal Executive requests that members forward suggestions through their Divisional Councils, bearing in mind that the signal must be appropriate and be dissimilar to any other signal used by Commercial Services.)

PERMITS TO RECORD AND RE-PLAY

The following Amateur Wireless Station Licensees in the various States have been granted permission to record and re-play transmissions from other Amateur Stations during the twelve months ending 1st September, 1951—

N.S.W.: No applications received.

Victoria: VK3VM, Dr. E. Marks, Malvern; VK3DH, Mr. J. Morgan, Hawthorn; VK3DU, Mr. W. A. Brownhill, Geelong; VK3BF, Mr. H. S. Fuller, Warrnambool; VK3TA, Mr. B. V. Harding, Horsham.

Queensland: No applications were received.

South Australia: VK5GL, Mr. C. Tibbuck, Colonel Light Gardens; VK5LR, Mr. Holston, Unley Park.

Western Australia: VK6KW, Mr. R. W. S. Hugo, Subiaco; VK6JS, Mr. J. Squires, Subiaco.

Tasmania: No applications were received.

APPLICANTS FOR DX C.C. PLEASE NOTE

Prospective members of the DX C.C. are reminded that the cards submitted to the DX C.C. Manager for checking are to be in alphabetical order of COUNTRY. C.C. use the following order showing call sign of station worked, date, frequency, and type of transmission must also be submitted.

SUCCESSFUL A.O.C.P. CANDIDATES

The following is a list of candidates who were successful at the examination for the Amateur Operator's Certificate of Proficiency held on Tuesday, 10th October, 1950:

New South Wales:

Aspery, R. J., 126 Charles Street, Ryde.
Dunford, R. G., 108 John Street, Coonabarabran.
Hanson, N. A., Ryan Avenue, West Kempsey.
Nowell, E. W., 109 Orman Street, Hurstville Park.
Rushby, A. W., c/o Mr. F. Cracknell, Lumsdane Street, Ficton.
Shearman, I. A., 182 Douglas Street, Stockton.
Smith, R. B., Cr. Glipa and Colura Streets, Dubbo.
Tavares, P. A., 39 Prince Street, Randwick.
Taylor, W. D., 14 Fortar Street, Stockton.
Thomas, B. W., 2 Havilah Avenue, Wahroonga.

Victoria:

Akram, M., R.A.A.F. Air and Ground Radio School, R.A.A.F. Ballarat.
Barnes, P. D., 14 Dendy Street, Middle Brighton, S.E.
Caporn, R. F., 12 Roosevelt Court, E. Brighton, S.E.
Cattosa, J. R., 14 Francis Street, Werribee.
Collins, M. A., 15 Natimuk Road, Horsham.
Lawless, L. E., 12 Hall Street, West Brunswick.
McVabb, R. I., Newstead.
Power, J. H., "The Shack," Birdwood via Mildura.

Queensland:

Atkinson, J. A., Cr. Meade and Western Streets, Wandall, Rockhampton.
Greenwood, R. H., c/o Department of Works and Housing, Box 250, Rockhampton.
Wetherley, H. J., East Street, Clifton.

South Australia:

Caldwell, W. C., N.T. Comd. Sig. Sqn. Milto, Darwin.
Corke, B. W., R.A.A.F. Station, Darwin.
Dow, M. R., 86 Alexandria Street, Prospect.
Neale, J. B., 9 Deacon Avenue, Marleston.
Schlegel, D. F., 44 Janet Street, Maryland.
Smith, B. C. W., 22 Jervois Street, Torrenville.

Western Australia:

Dorsett, H. R., 30 View Street, Albany.

Tasmania:

Kirmse, A. G., Flat 5, 10 Frederick St., Launceston.

ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—OCTOBER, 1950

Additions—

VK2HM—R. S. Sargent, 93 Willison Rd., Carlton.
2ACK—J. A. McCay, "Alray," Boundary St., Tweed Heads.
2AQP—H. P. Forrell, 15 Stewart St., Artarmon.
2ASA—W. A. Symons, 53 Eldon St., Ainslie, A.C.T.
2ATB—R. Bamber, 41 Hamilton St., Laus Cove.
2AVS—R. T. Southwood, 183 Liverpool St., Sydney.
2AWY—W. O. Yates, 25 Thomas St., Orange.
2AXM—W. A. McDvitt, 153 Maitland Rd., Mayfield, Newcastle.
VK3ADD—D. C. Dunstall, 11 Chausser St., Moonee Ponds.
3AEE—C. B. Edmonds, Golden Vein, Willowmavin.
3AHE—H. J. Albrecht, 10 Belgravia Ave., Box Hill North.
VK4JG—J. J. Gallagher, c/o Radio Station 4CA, Cairns.
4LA—W. G. Smith, Walloon Road, Amberley.
4PT—C. R. J. Paton, 3 Jennings St., Toowoomba.
VK5HE—H. V. Eastwood, 23 South Pde., Darlington.
5LM—C. W. Meach, R.A.A.F. Station, Darwin.
VK6BS—B. H. Smith, Aveo 19401 or 19400, Mannamanning.
6JA—J. A. Cook, 70 Angel St., South Perth.
VK9NY—J. M. Harrison, c/o A.W.A. Ltd., Aviation Service Depot (Aerodrome, Las, T.N.G.).

Alterations—

VK2BP—29 Stevenson Street, Birrong.
2MB—51 Watson Street, Bondi.
2XS—60 Spotsford Street, Cremorne.
2ADG—8 Timmins St., Birmingham Gardens.
2ARJ—"Rothway," 147 William Street, Young.
2APJ—"Forest Glades," Torokina Ave., St. Ives.
2AGA—8 Sylvia Rd., Sylvania Heights.
2AGZ—9 Pleasant Ave., Wollongong.
2ART—5 Elmatia Rd., Mona Vale.
2ALG—Bourke Street, Parramatta.
2ANW—100 Crown Street, Wagga.
2ANC—Post Office Road, Orange.
2ANO—6 Gore Street, Armfield.
2ARE—152 Eastern Valley Way, Castlereag.
2AVO—8 Smith Street, Wollongong.

VK3SQ—23 Jordan Street, Malvern.

3TY—c/o. 3TR, Sale.
3TZ—c/o. Coles Pharmacy, 96 Main St., Stawell.
5ZO—Flat 7, 40 Manningsham St., Parkville.
5AOT—53 Dakin St., Essendon West.
5AJZ—A. J. Zarth, 443 Waverley Rd., North Carnegie.
5AWB—585 Bell Street, Preston.
VK4MG—Cr. Sandgate Road and Eton St., Nunah.
4QA—2 Lillie Street, Toowoomba.
4SV—36 Jamieson Street, Bulimba.
VK5CD—32 Kitchener Street, Kilburn.
5CB—243 Molliey Ter., Whyalia (P.O. Box 107).
5KB—D.C.A. Aerodrome, Mount Gambler.
5KD—Shepherdson Road, Mount Gambler.
VK6BT—23 Grand Promenade, Baywater.
6FL—"Hillcrest," Gooseberry Hill.

Deletions—

VK5HB—Cancelled.
2AIX—Cancelled.
5AXY—Cancelled, now operating under VK9NY.
2ARS—Cancelled, now operating under VK4JG.
VK5AOP—Cancelled, now operating under VK2ACK.
VK6RC—Cancelled.
4SJ—Cancelled, now operating under VK2AVS.
4WY—Cancelled, now operating under VK5AWY.
VK5UJ—Cancelled.
5SA—Cancelled, now operating under VK2ASA.

FEDERAL QSL BUREAU

RAY JONES, VK3PJ, MANAGER

And yet another for the certificate hunters. The A.R.A.L.V. (Association of Radio Amateurs of Las Villas), Cuba, gives a Certificate or Diploma to all foreign Amateurs who have worked the eight radio districts of Cuba. The QSO may be in c.w., or phone on any band, and t.w.'s may also claim the award. Forward your eight QSLs to Box 135, Santa Clara, Cuba. The eight districts are as follows: Pinar del Rio, City of Havana, Province of Hayana, Isle de Pines, Province of Matanzas, Province of Las Villas, Province of Camaguey, and Province of Oriente. Stations signing CO work c.w. and phone all bands (Class A); stations signing CM work c.w. on all bands, but phone only on 7 Mc. (Class B); CM9 is not a district. It is a prefix allotted for purely experimental work.



Throughout the world
this symbol guides the
Choice of Millions.

PHILIPS INNOVATION

BEST FOR ALL
ELECTRONIC
APPLICATIONS

INCORPORATES
REVOLUTIONARY NEW
TECHNIQUES

MAINTAINS FACTORY
"FINAL TEST"
CONDITION

SUITABLE FOR
A.M., F.M. or T.V.

SMALL IN SIZE—
"ALL-GLASS"
CONSTRUCTION

UNAFFECTED BY EXTREME
CONDITIONS—ATMOSPHERIC
OR PHYSICAL

SIMPLIFIES RECEIVER
DESIGN PROBLEMS

SINGLE ENDED—
STANDARDISED
9 PIN BASE

EASIER RESTORATION OF
RECEIVERS TO ORIGINAL
CONDITION AFTER VALVE
REPLACEMENT



KX6AA, Louis Snell, with home QTH at Donnellson, Ill., U.S.A., offers apologies to any station who had to pay surcharges on cards from him. Lou desires all QSLs to be sent to his home QTH and is taking home his log so that he can reply to all cards received.

A "Ham" interpreter" and abridged dictionary has been published by OH2SQ. Mr. Pentti Aarnio, Helsinki, Tapioentie 21, Finland. The publication is in Finnish and is available for purchase from S.R.A.L. The book has sections dealing with alphabet, numbers, general calls, calling other stations, expressions of courtesy, miscellaneous phrases, and a list of abbreviations. It also contains a list of QSOs and a glossary of useful words. All of the above subjects are given in English, French, Spanish, Italian, German, Swedish and Finnish. Assistance is also given in the use of the Morse code. The book is published by S.R.A.L. OH2SQ, P.O. Box 100, Helsinki, Finland. The book is well indexed and useful to all amateur radio operators. It is extremely inexpensive. The book is available from all radio stations as well. While the terms of VK licenses ensure that VK stations must make all their transmissions in English, it is extremely desirable, if not possible by VK stations using English and the foreign station using his national language. The "Ham's Interpreter" will make this possible. Any amateur radio operator who is interested in this book to the author-publisher at the address shown above.

Further interesting news from Max Risper, VK9MR (ex-VK3AMR), care D.C.A., Madang, New Guinea, indicates that he has completed one year of his three-year sojourn at that location. Max now has installed a beam on 28 Mc. Projected installations include a BC610 for use on 7, and 28 Mc. bands. Max has a 100-watt 815 in final, and his μ has a power output of 240. His antenna has a g_p of 0.5 VKA and has to supply the 8X25 as well as the BC610, there will not be much left for the final. Present rig uses an 815 in final with 70 watts on c.w. and 60 on phone using zero bias. Max also mentions a big swag of cards on the way down but they have not arrived up to 6th November.

Morris, VK3BZ, having now published a full list of VK DX C.C. awards in November "A.R." will next turn his attention to an up to date list of countries. Air liaison with A.R.R.L. and R.S.G.B. stations will make the compilation of this list possible at an early date.

Johnny Jones, VKSRG, ex-JA5AJ, has arrived home after a 21 months' sojourn with the B.C.O.F. (R.A.A.F.) at Iwakuni, Japan.

NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, on Friday, 27th October, 1950. Proceedings opened at 7.45 p.m. with a packed house and the ushers were kept busy supplying chairs for the stragglers. What business was outstanding received prompt attention and was finalised.

Angus Robertson, VK2QZ, then delivered his lecture on the subject of "Crystals and Crystal Oscillators." Angus in his usual inimitable style completely debunked the idea that many Amateurs have regarding the stability of crystals in general. Without delving into the realm of higher mathematics, Angus ably demonstrated that drift in a crystal is inherent and according to the type of cut and the temperature regulation.

Angus, then anticipating a later question, described at length the method required to obtain a measurement accurate to one part in one hundred million. He also described other methods of frequency control other than crystal control, and precision equipment for frequency measurement that he has seen in operation in various parts of the world. Angus concluded his lecture by adding some words of wisdom on obtaining crystal stability under amateur operating conditions.

A number of visitors were present including one of the fraternity with a very rare call which made the DX men rather weak at the knees.

Council was authorised by the meeting to take constitutional steps to deal with 170 unfinancial members in accordance with Article 48 of the Articles of Association.

EASTERN SUBURBS

A leaning to v.h.f. channels prevails in the area just now. To be heard on 144 Mc. are 2PU, 2CE, 2AX and 2AFZ. There are others no doubt, according to the grape-vine. Active occasionally on 144 Mc. is 2BZ, who has been called "the one 'All Band Man' around here." 2ARD is temporarily QRT owing to illness in the family (hope it is soon OK OM). Noted that 2MB has a new QTH on 144 Mc. and is working on a new program. Another contact for 2ASE's "Worked All BQD" award. 2ASE is heard in action on 40 with a roster of cobsers, and puts out good phone. 2AHQ doesn't appear to find much time for brass-putting on 144 Mc. but is heard on 40. It is noted that three "harmonics" keep him in harness, 2BC,

one of the really old time gang, is not active either, being very QRL with picture transmission stuff in a commercial capacity.

2MY, although having recently acquired a nice receiver, hardly finds time to listen and certainly is not on the air. Daily toll, it is rumoured, takes him over to regions where he may sport a VW car, as yet, is a very nice Daimler Rumor. 2AIG, always on his toes, is barely able to devote 10 per cent. time on phone and the other 90 or brass-pounding. Ray is one of those people who keep the key on the operating table for other purposes than just to impress visitors. 2CF appears infrequently on 40 phone with a very nice transmission. 2G, who has been on the air for several years, recently on 40 phone with a very nice transmission. They tell me that that John doesn't know about relay isn't worth knowing.

The gem of the month seems to be an unofficial general call initiated ('tis understood) by 2ABW. Colin reckoned that those VKs who so blatantly contact American Amateurs with the purpose of wheeling gear (even receivers) out of them should announce their purpose by calling "CQ ASGAG." Which means simply, "Calling Any Sucker Giving Away Gear." Yes OM, some stations (not in the area) must have given us the impression lately that we are an insignificant lot.

The outstanding single sideband exponent in the part of the world continues to be ZCP, who always ready to pop his QRM-cutting transmission

on. He has made lots of overseas two-ways now using a.s.a.c. The other shining light in that respect is 2AC. Doesn't appear to be active. Maybe on v.h.f. Leo? Over in that Kingsford area there is a bright little gang of 576. More enthusiastic who are doing things. They include the 2BW. I have noted that a N.S.W. Western Zone correspondent asks, in "AR" for October last, "How many Hamlets can find a 250 in their shack?" Well OM, if you looked around this area you would find in an Old Timer's collection of odds and ends, not only one or two 2X250s, but a yet intact Marconi T250. This is a 250 watt tube, and it is a 250 watt tube, or two, and rated a bit of P.V. in the 13750

For the edification of youth, the filament requirement for this bottle is 12 volts at 12 amperes.

Over in Cooshee that Contest Warrior 2YA heard well in the fray whenever the intervals of Contestitis prevail. Vince appears to have blossomed forth again with an array on 20 instead of the rotary dipole that has sat atop the tower of late. Recent visitors in the area have included 3DF, ZL1OF and 2CM. 2NO, able to get on the air at intervals, has been in again on one of the "Three Musketeers" contacts with ZL1BQ and JASAI on 20 meters plus. The "Musketeers" are known to be good luck to A.O.C.P. aspirant Harry Oakes of the Centennial Park region in his exam for the coveted ticket. You'll make the grade yet Harry!

WESTERN SUBURBS

2ADL has a new power amplifier in the shape of a recently arrived junior operator. Congrats ERN 28K working 251 morning DX and has been heard working his old friends in Algeria. 2AFT is still on again after a bout of pneumonia. 3AK is still rather shaky, but hot on the trail of DX. 2X has been wrestling furiously with his new beam and will unload a big signal soon. 2VY also be happy and will provide stout competition in the Bankstown area. 2ZF has two new masts up now and finds that getting onto the DX is not so hard after all.

2ABO has been grabbing some good DX on 3 and is never at a loss for words! 2ANC is now in operation from the new location but has little time available; has a big job ahead in building a new house. 2AQ, amazed to hear Harry working a few Russians on c.w. 2ACD has been working some good DX lately; has a folded dipole up and finds it very good. 2AHU is doovering with microphone and now sports a folded dipole.

2.0's. EXTEND SEASONAL GREETINGS

Country Zone Officers, Crieff 2X0, Harold 2A5A, Harry 2Y1, Hugh 2VWH, and Roy 2D0, extend to all the country gang the best wishes for the Festive Season. They hope in 1951 to hear of all your doings in these columns. You like to know what the other chaps is doing, and they want to know the news of your efforts. So make that New Year's resolution and pass the information along.

NORTH COAST AND TABLELANDS

2RK just returned from holidays and is active on 40 and 80. 2ASO now using phone on 40. Lismore gang not active or rather audible, believe they yarn amongst themselves on 6. Believe we have two Hams at Byron Bay, has anyone heard of them of late? From Port Macquarie only one signal can be heard, 2PA, although the town boasts 200 Amateurs. 2ASF keeps Keespie on the map with his consistent signal on 40. 2AEY had a visit to the Clarence and met the boys on the way - staying the night at Maclean and embarked 10E until 10.

early hours of the morning. EJC making Urunga for Xmas holidays, Hart's XYL has not enjoyed the best of health of late and the zone hopes she is soon 100 per cent. ZWT works plenty of DX with his rhombic.

Most of the North Coast gang have had a visit from the R.I. and had their gear checked over. 2APS on the air with burnt out power supply. 2BSR on the air, complete silence. 2BWB on the air, no transmitter. The monitor, 2WQ, still listening. 2BSR still having slight b.c.i. trouble but hopes to clear it up soon. 2C3 building machine a new home. 2C4P on the air, no transmitter. 2C4P has a transmitter active on all bands and will be on 6 after a while. Elsie and Len have their four weeks' holiday; will be along to the Woy Woy "do." 2A2T putting out good signal with his new mike. 4WG active again. 4WJ on the air, no transmitter. 4WJ has a transmitter work done by them during the Leachian Soeds. 6D6 anyone hear someone calling QO Hunter Beach with a r.a.c. voice, it was good to hear the happy voices of the members and their w-c-racks in the H.B. "Scramble."

HUNTER BRANCH

Both the October and November meetings of our Branch were well attended. The Committee's decision of presenting two short lectures each meeting appealed to catching on fine, adds greater variety to the evening, certain as well as getting more volunteers for lectures. I saw a few people who were enjoying life in the job, he says the work was more than compensated by the pleasure gained in doing it. Incidentally, Varley was able to get on with the work of the branch. "Some of the best of the first QSO. Had the pleasure of the visit from "Duke of Dooside" during the month, Jack 208 introduced me to "Putt-Putt Pete." Jack made me to know that Maitland district seemed to enjoy himself."

The highlight of the month was the Hunter Branch "Scramble," or boy, what a scramble it was. The great time was had by all. 2ADT was the winner of the first round, 2B was second, 2C was third, 2D was fourth, 2E was fifth, 2F was sixth, 2G was seventh, 2H was eighth, 2I was ninth, 2J was tenth, 2K was eleventh, 2L was twelfth, 2M was thirteenth, 2N was fourteenth, 2O was fifteenth, 2P was sixteenth, 2Q was seventeenth, 2R was eighteenth, 2S was nineteenth, 2T was twentieth, 2U was twenty-first, 2V was twenty-second, 2W was twenty-third, 2X was twenty-fourth, 2Y was twenty-fifth, 2Z was twenty-sixth, 2AA was twenty-seventh, 2AB was twenty-eighth, 2AC was twenty-ninth, 2AD was thirtieth, 2AE was thirty-first, 2AF was thirty-second, 2AG was thirty-third, 2AH was thirty-fourth, 2AI was thirty-fifth, 2AJ was thirty-sixth, 2AK was thirty-seventh, 2AL was thirty-eighth, 2AM was thirty-ninth, 2AN was fortieth, 2AO was forty-first, 2AP was forty-second, 2AQ was forty-third, 2AR was forty-fourth, 2AS was forty-fifth, 2AT was forty-sixth, 2AU was forty-seventh, 2AV was forty-eighth, 2AW was forty-ninth, 2AX was fiftieth, 2AY was fifty-first, 2AZ was fifty-second, 2BA was fifty-third, 2BB was fifty-fourth, 2BC was fifty-fifth, 2BD was fifty-sixth, 2BE was fifty-seventh, 2BF was fifty-eighth, 2BG was fifty-ninth, 2BH was sixtieth, 2BI was sixty-first, 2BJ was sixty-second, 2BK was sixty-third, 2BL was sixty-fourth, 2BM was sixty-fifth, 2BN was sixty-sixth, 2BO was sixty-seventh, 2BP was sixty-eighth, 2BQ was sixty-ninth, 2BR was seventieth, 2BS was seventy-first, 2BT was seventy-second, 2BU was seventy-third, 2BV was seventy-fourth, 2BW was seventy-fifth, 2BX was seventy-sixth, 2BY was seventy-seventh, 2BZ was seventy-eighth, 2CA was seventy-ninth, 2CB was eightieth, 2CC was eighty-first, 2CD was eighty-second, 2CE was eighty-third, 2CF was eighty-fourth, 2CG was eighty-fifth, 2CH was eighty-sixth, 2CI was eighty-seventh, 2CJ was eighty-eighth, 2CK was eighty-ninth, 2CL was ninetieth, 2CM was ninety-first, 2CN was ninety-second, 2CO was ninety-third, 2CP was ninety-fourth, 2CQ was ninety-fifth, 2CR was ninety-sixth, 2CS was ninety-seventh, 2CT was ninety-eighth, 2CU was ninety-ninth, 2CV was one hundredth, 2CW was one hundred and first, 2CX was one hundred and second, 2CY was one hundred and third, 2CZ was one hundred and fourth, 2DA was one hundred and fifth, 2DB was one hundred and sixth, 2DC was one hundred and seventh, 2DD was one hundred and eighth, 2DE was one hundred and ninth, 2DF was one hundred and tenth, 2DG was one hundred and eleventh, 2DH was one hundred and twelfth, 2DI was one hundred and thirteenth, 2DJ was one hundred and fourteenth, 2DK was one hundred and fifteenth, 2DL was one hundred and sixteenth, 2DM was one hundred and seventeenth, 2DN was one hundred and eighteenth, 2DO was one hundred and nineteenth, 2DP was one hundred and twentieth, 2DQ was one hundred and twenty-first, 2DR was one hundred and twenty-second, 2DS was one hundred and twenty-third, 2DT was one hundred and twenty-fourth, 2DU was one hundred and twenty-fifth, 2DV was one hundred and twenty-sixth, 2DW was one hundred and twenty-seventh, 2DX was one hundred and twenty-eighth, 2DY was one hundred and twenty-ninth, 2DZ was one hundred and thirtieth, 2EA was one hundred and thirty-first, 2EB was one hundred and thirty-second, 2EC was one hundred and thirty-third, 2ED was one hundred and thirty-fourth, 2EE was one hundred and thirty-fifth, 2EF was one hundred and thirty-sixth, 2EG was one hundred and thirty-seventh, 2EH was one hundred and thirty-eighth, 2EI was one hundred and thirty-ninth, 2EJ was one hundred and fortieth, 2EK was one hundred and forty-first, 2EL was one hundred and forty-second, 2EM was one hundred and forty-third, 2EN was one hundred and forty-fourth, 2EO was one hundred and forty-fifth, 2EP was one hundred and forty-sixth, 2EQ was one hundred and forty-seventh, 2ER was one hundred and forty-eighth, 2ES was one hundred and forty-ninth, 2ET was one hundred and fiftieth, 2EU was one hundred and fifty-first, 2EV was one hundred and fifty-second, 2EW was one hundred and fifty-third, 2EX was one hundred and fifty-fourth, 2EY was one hundred and fifty-fifth, 2EZ was one hundred and fifty-sixth, 2FA was one hundred and fifty-seventh, 2FB was one hundred and fifty-eighth, 2FC was one hundred and fifty-ninth, 2FD was one hundred and sixtieth, 2FE was one hundred and sixty-first, 2FF was one hundred and sixty-second, 2FG was one hundred and sixty-third, 2FH was one hundred and sixty-fourth, 2FI was one hundred and sixty-fifth, 2FJ was one hundred and sixty-sixth, 2FK was one hundred and sixty-seventh, 2FL was one hundred and sixty-eighth, 2FM was one hundred and sixty-ninth, 2FN was one hundred and seventieth, 2FO was one hundred and seventy-first, 2FP was one hundred and seventy-second, 2FQ was one hundred and seventy-third, 2FR was one hundred and seventy-fourth, 2FS was one hundred and seventy-fifth, 2FT was one hundred and seventy-sixth, 2FU was one hundred and seventy-seventh, 2FV was one hundred and seventy-eighth, 2FW was one hundred and seventy-ninth, 2FX was one hundred and eightieth, 2FY was one hundred and eighty-first, 2FZ was one hundred and eighty-second, 2GA was one hundred and eighty-third, 2GB was one hundred and eighty-fourth, 2GC was one hundred and eighty-fifth, 2GD was one hundred and eighty-sixth, 2GE was one hundred and eighty-seventh, 2GF was one hundred and eighty-eighth, 2GG was one hundred and eighty-ninth, 2GH was one hundred and ninetieth, 2GI was one hundred and one hundredth, 2GJ was one hundred and one hundred and first, 2GK was one hundred and one hundred and second, 2GL was one hundred and one hundred and third, 2GM was one hundred and one hundred and fourth, 2GN was one hundred and one hundred and fifth, 2GO was one hundred and one hundred and sixth, 2GP was one hundred and one hundred and seventh, 2GQ was one hundred and one hundred and eighth, 2GR was one hundred and one hundred and ninth, 2GS was one hundred and one hundred and tenth, 2GT was one hundred and one hundred and eleventh, 2GU was one hundred and one hundred and twelfth, 2GV was one hundred and one hundred and thirteenth, 2GW was one hundred and one hundred and fourteenth, 2GX was one hundred and one hundred and fifteenth, 2GY was one hundred and one hundred and sixteenth, 2GZ was one hundred and one hundred and seventeenth, 2HA was one hundred and one hundred and eighteenth, 2HB was one hundred and one hundred and nineteenth, 2HC was one hundred and one hundred and twentieth, 2HD was one hundred and one hundred and twenty-first, 2HE was one hundred and one hundred and twenty-second, 2HF was one hundred and one hundred and twenty-third, 2HG was one hundred and one hundred and twenty-fourth, 2HH was one hundred and one hundred and twenty-fifth, 2HI was one hundred and one hundred and twenty-sixth, 2HJ was one hundred and one hundred and twenty-seventh, 2HK was one hundred and one hundred and twenty-eighth, 2HL was one hundred and one hundred and twenty-ninth, 2HM was one hundred and one hundred and thirtieth, 2HN was one hundred and one hundred and thirty-first, 2HO was one hundred and one hundred and thirty-second, 2HP was one hundred and one hundred and thirty-third, 2HQ was one hundred and one hundred and thirty-fourth, 2HR was one hundred and one hundred and thirty-fifth, 2HS was one hundred and one hundred and thirty-sixth, 2HT was one hundred and one hundred and thirty-seventh, 2HU was one hundred and one hundred and thirty-eighth, 2HV was one hundred and one hundred and thirty-ninth, 2HW was one hundred and one hundred and fortieth, 2HX was one hundred and one hundred and forty-first, 2HY was one hundred and one hundred and forty-second, 2HZ was one hundred and one hundred and forty-third, 2IA was one hundred and one hundred and forty-fourth, 2IB was one hundred and one hundred and forty-fifth, 2IC was one hundred and one hundred and forty-sixth, 2ID was one hundred and one hundred and forty-seventh, 2IE was one hundred and one hundred and forty-eighth, 2IF was one hundred and one hundred and forty-ninth, 2IG was one hundred and one hundred and fiftieth, 2IH was one hundred and one hundred and fifty-first, 2II was one hundred and one hundred and fifty-second, 2IJ was one hundred and one hundred and fifty-third, 2IK was one hundred and one hundred and fifty-fourth, 2IL was one hundred and one hundred and fifty-fifth, 2IM was one hundred and one hundred and fifty-sixth, 2IN was one hundred and one hundred and fifty-seventh, 2IO was one hundred and one hundred and fifty-eighth, 2IP was one hundred and one hundred and fifty-ninth, 2IQ was one hundred and one hundred and sixtieth, 2IR was one hundred and one hundred and sixty-first, 2IS was one hundred and one hundred and sixty-second, 2IT was one hundred and one hundred and sixty-third, 2IU was one hundred and one hundred and sixty-fourth, 2IV was one hundred and one hundred and sixty-fifth, 2IV was one hundred and one hundred and sixty-sixth, 2IV was one hundred and one hundred and sixty-seventh, 2IV was one hundred and one hundred and sixty-eighth, 2IV was one hundred and one hundred and sixty-ninth, 2IV was one hundred and one hundred and seventieth, 2IV was one hundred and one hundred and seventy-first, 2IV was one hundred and one hundred and seventy-second, 2IV was one hundred and one hundred and seventy-third, 2IV was one hundred and one hundred and seventy-fourth, 2IV was one hundred and one hundred and seventy-fifth, 2IV was one hundred and one hundred and seventy-sixth, 2IV was one hundred and one hundred and seventy-seventh, 2IV was one hundred and one hundred and seventy-eighth, 2IV was one hundred and one hundred and seventy-ninth, 2IV was one hundred and one hundred and eightieth, 2IV was one hundred and one hundred and eighty-first, 2IV was one hundred and one hundred and eighty-second, 2IV was one hundred and one hundred and eighty-third, 2IV was one hundred and one hundred and eighty-fourth, 2IV was one hundred and one hundred and eighty-fifth, 2IV was one hundred and one hundred and eighty-sixth, 2IV was one hundred and one hundred and eighty-seventh, 2IV was one hundred and one hundred and eighty-eighth, 2IV was one hundred and one hundred and eighty-ninth, 2IV was one hundred and one hundred and ninetieth, 2IV was one hundred and one hundred and one hundredth, 2IV was one hundred and one hundred and one hundred and first, 2IV was one hundred and one hundred and one hundred and second, 2IV was one hundred and one hundred and one hundred and third, 2IV was one hundred and one hundred and one hundred and fourth, 2IV was one hundred and one hundred and one hundred and fifth, 2IV was one hundred and one hundred and one hundred and sixth, 2IV was one hundred and one hundred and one hundred and seventh, 2IV was one hundred and one hundred and one hundred and eighth, 2IV was one hundred and one hundred and one hundred and ninth, 2IV was one hundred and one hundred and one hundred and tenth, 2IV was one hundred and one hundred and one hundred and eleventh, 2IV was one hundred and one hundred and one hundred and twelfth, 2IV was one hundred and one hundred and one hundred and thirteenth, 2IV was one hundred and one hundred and one hundred and fourteenth, 2IV was one hundred and one hundred and one hundred and fifteenth, 2IV was one hundred and one hundred and one hundred and sixteenth, 2IV was one hundred and one hundred and one hundred and seventeenth, 2IV was one hundred and one hundred and one hundred and eighteenth, 2IV was one hundred and one hundred and one hundred and nineteenth, 2IV was one hundred and one hundred and one hundred and twentieth, 2IV was one hundred and one hundred and one hundred and twenty-first, 2IV was one hundred and one hundred and one hundred and twenty-second, 2IV was one hundred and one hundred and one hundred and twenty-third, 2IV was one hundred and one hundred and one hundred and twenty-fourth, 2IV was one hundred and one hundred and one hundred and twenty-fifth, 2IV was one hundred and one hundred and one hundred and twenty-sixth, 2IV was one hundred and one hundred and one hundred and twenty-seventh, 2IV was one hundred and one hundred and one hundred and twenty-eighth, 2IV was one hundred and one hundred and one hundred and twenty-ninth, 2IV was one hundred and one hundred and one hundred and thirtieth, 2IV was one hundred and one hundred and one hundred and thirty-first, 2IV was one hundred and one hundred and one hundred and thirty-second, 2IV was one hundred and one hundred and one hundred and thirty-third, 2IV was one hundred and one hundred and one hundred and thirty-fourth, 2IV was one hundred and one hundred and one hundred and thirty-fifth, 2IV was one hundred and one hundred and one hundred and thirty-sixth, 2IV was one hundred and one hundred and one hundred and thirty-seventh, 2IV was one hundred and one hundred and one hundred and thirty-eighth, 2IV was one hundred and one hundred and one hundred and thirty-ninth, 2IV was one hundred and one hundred and one hundred and fortieth, 2IV was one hundred and one hundred and one hundred and forty-first, 2IV was one hundred and one hundred and one hundred and forty-second, 2IV was one hundred and one hundred and one hundred and forty-third, 2IV was one hundred and one hundred and one hundred and forty-fourth, 2IV was one hundred and one hundred and one hundred and forty-fifth, 2IV was one hundred and one hundred and one hundred and forty-sixth, 2IV was one hundred and one hundred and one hundred and forty-seventh, 2IV was one hundred and one hundred and one hundred and forty-eighth, 2IV was one hundred and one hundred and one hundred and forty-ninth, 2IV was one hundred and one hundred and one hundred and fiftieth, 2IV was one hundred and one hundred and one hundred and fifty-first, 2IV was one hundred and one hundred and one hundred and fifty-second, 2IV was one hundred and one hundred and one hundred and fifty-third, 2IV was one hundred and one hundred and one hundred and fifty-fourth, 2IV was one hundred and one hundred and one hundred and fifty-fifth, 2IV was one hundred and one hundred and one hundred and fifty-sixth, 2IV was one hundred and one hundred and one hundred and fifty-seventh, 2IV was one hundred and one hundred and one hundred and fifty-eighth, 2IV was one hundred and one hundred and one hundred and fifty-ninth, 2IV was one hundred and one hundred and one hundred and sixtieth, 2IV was one hundred and one hundred and one hundred and sixty-first, 2IV was one hundred and one hundred and one hundred and sixty-second, 2IV was one hundred and one hundred and one hundred and sixty-third, 2IV was one hundred and one hundred and one hundred and sixty-fourth, 2IV was one hundred and one hundred and one hundred and sixty-fifth, 2IV was one hundred and one hundred and one hundred and sixty-sixth, 2IV was one hundred and one hundred and one hundred and sixty-seventh, 2IV was one hundred and one hundred and one hundred and sixty-eighth, 2IV was one hundred and one hundred and one hundred and sixty

2FX is settled down in his new location and busy on the gear when time permits. The v.f.o. at 2KG is going well—so it won't be long now. 2AAK is getting the 100-watt 200-kc. converter going. The gear he's now gear playing up in the new shack. 2ZC has a very nice converter going on the v.h.f. bands. RANAN has a 100-watt 200-kc. converter going, but he's not yet forgot to use it in the contest. 2NX has been Ham Radio away from all accounts, has the cash to buy a new 100-watt 200-kc. converter, and is getting their list class commercial tickets—yes, 2LY was putting out a very nice sig on the new 100-watt 200-kc. converter. 2YB is getting the 100-watt 200-kc. converter promptly "jumped on" too. The 20/10 phone man, 2YE, was also on 40 snapping numbers. Bert had a 100-watt 200-kc. converter going, and he's hoping we hope he will pass on to the boys in the form of a short lecture—what say? PRQ for his offer of a 100-watt 200-kc. converter. QTH is 2000 ft. above sea level. The 100-watt 200-kc. converter Tom won't sell, but he's having a good time with it.

The Entrenchment were sorry to hear that BZB has been ill, we all wish you a speedy recovery. The boys miss you on 6 and 2. ZOS is putting a very good record together for the year and you should do even better on some QRO songs. ZAB has been on 6 with a temporary antenna from the States and has been doing well. ZAB has the 20 rotary nearly completed, using brass tubing and should be knocking over the DX by the end of the year. ZAB has been doing well on the carpenter now-a-days. Bert made an extra good job of the garage and has only been on 40 and 20 with the 20 rotary. ZAB has been doing well on the very busy travelling, but likes the yams on 40 with ZASF, was heard entertaining an OT recently. ZAB has been doing well on the 20 rotary gear, but should be OK now. ZDZ is having fun on 20 working the Gs when time permits. On 20, ZAB has been very quiet with an occasional QSO on 40 should be OK for the QIG. ZAB still working hard trying to get on 40. We have a new Ham in the center station, old-timer Bill, who has been on 40 for a while. Bill has been

to move to Charleston very soon; what about coming to our meeting and meet the gang.

Up at Maitland, 2XQ has his emergency rig, the 1196, going very f.b. now—he really did enjoy the "Scramble" from all accounts. The November sked of the emergency net went OK. DX heard, 2DG, went into the contest too, finishing up with a good score. 2ANL is now active on 6-10-16-40-80 using 807A signals are very strong in Newcastle, especially on 80. 2ANU hopes to get going on 2 soon, meanwhile is doing very well on 6 with an 80 signal in Newcastle using 6es power. 2TY has a private line to RH6 on 10, having had over 160 QSOs with one particular RH6. 2ZY only seems to be active on 10, but does well on that band. 2AKP at Ew. Maitland is very QRL, but hopes to get on 6 shortly. 2AHA exchanged a few numbers in the "Scramble". A very merry Xmas to all W.L.A. members from the Hunter Branch boys.

COALFIELDS AND LAKES

Most interesting during the past month was centred around the Hunter Branch "Scramble". Many stations in the zone took part. Many a story will be told of the way the 50 and 144 Mc. boys stuck to their bands and put up good scores. 208, 2YL and 2ADT worked every possible 50 Mc. station in the contest. 2ADT was the only station to concentrate on 144 Mc. work and had contacts with seven stations in Singleton, Newcastle, Kurri Kurri, Cessnock and Lochinvar. 2VU finally made 2 metres by contacting 2ADT using a four element beam. 2KF has an 807 tripling to 144 Mc, goes quite well with 400v, at 60 Ma. 2EK rescued his 2 metre beam from fowl house. 2TY re-appeared on 2 after absence of about six months, while 2PZ made time to have a QSO.

2ANU still doing remarkably well with his 4 watts, had several 50 Mc. test contacts, at present is building up 2 metre gear. 2TY is one of the consistent ones on 6 and looking forward to the summer DX. Battling hard to finish cupboard building before DX breaks. 2KP putting out a consistent signal on 2, 6 and 10. Watch out for wire entanglements if you visit Bok. Submitted to 2EK that he couldn't move for wire. Only heard 2YO on 10. 2YZ fairly slow, but with a converted AT5 for some of the lower frequencies. 2ALR at present not active. 2YL working all bands a little and has got himself on 2; works 2ADT with a dipole in a shack. 2QA is going on 2 and 6, has a good sig on 6 here in the Cfields. 2RU seems to be laying low waiting to pounce on any 6 DX that may show up. 2RR is doing on 6 working his locals, but not heard here on Coalfields.

WESTERN ZONE

With the floods out west, the members of the zone have been busy in emergency work. Zone Officer, 2WIL, is isolated once again—no mail—for about the twentieth time this year. In Orange, 2LAX has put his AT20 on 6 and 2JV expects a month on 144 listening and calling, but no results. Lost his 144 beam in a blow and will be on 6 soon. In the Blue Mountains, stations are not very active. 2LY specialising in Eas, the line-up at present is: 15 Kc. to 2,000 Kc. a R.C.A. marine job, Philips No. 4 reception set 1.2 to 20 Mc., HRO 190 Kc. to 20 Mc. and SP2 27 to 145 Mc. and an ASV Rx for 144 Mc.—just the bare five; Stan's 30 foot telegraph pole for the 6 beam went up recently. 2ET and 2AF both arrays ops, are active on 20 and 40 when home. 2LZ finished the garage and now started the house; the YF was very surprised, didn't think the GM would ever make a builder. OTS remember he built a "Queen Mary" once, a receiver five feet long! 2PI doing a little on Mc. 2HZ still busy on the shack between planting spuds. 2X still working in the garden too, would like to get on 10 again and annoy the Ws during the day.

SOUTH COAST AND SOUTHERN

Mr. Reg George, associate member of Coosamundra, has forwarded along notes for this edition. Within two days of the broadcast from 2WJ suggesting that associate members could help the zone officer in collecting notes, we had a letter from Reg offering a helping hand. 2APP active on 40, having a yarn over the back fence with 2TC and 2BT in Forbes. Much discussion on doubler coils, 101s and P6s power supply. Say BU, that 101 must have been altered if it had a 6V6 in it. 2AEL doing a spot on 40, excellent sig seems to be going places. 2PI active on 40 and 20. 2J and 2L, has worked a KRT on 20. Believe a beam crpt into the discussion between 2PI and 2PM—what band fellows? Not 144! 2RM heard on 40 running 100 watts, 3 meter won't go round more than twice Harry. "The reported speech quality is very good—guess you must have put some granules in the mike."

20Y burning holes in 40, heard working North Coast stations; little bird tells me your YF won't allow QSL cards to be mailed on the lounge room wall. Jack. 2ON on 40 with nice signal from n.b.f.m.—very pleasing quality. 2AOX laying down swell signal on 40 and has some QSOs on 20; rig has been re-built. 2DY, President of the "Gong Club", is active under his own call. The 2YL is

quickly adapting herself to the Ham bands and was heard yarning to her hater's content. 2AER and 2DY had visions of illegal transmitter, etc., on one QSO, but things sorted themselves out to their satisfaction. 2AMV and 2WP also putting forth mighty signals; Bill uses the c.w. to raise DX on 40. Only Wagga station heard, struck some heavy QRM and not much to report other than was 2AGP. Nil from 2JQ, believe he will be moving to Junee at the end of November. 2ADX active on 2. 2ALS has acquired a Kx bearing the call X328, 15 tubes no lead and all the redemptions. A great improvement was noticed when an extra r.f. stage was added to the ARS, an 1852 doing a fine job. 2DO made a comeback on 40 and had a few words with the boys during a home-to-lunch session.

VICTORIA

The November monthly meeting was held at the Radio School, Bowen St., Melbourne, on Wednesday, 1st November. The attendance was good despite the transport difficulties, there being approximately 150 members present. The President (3428) occupied the chair and declared the meeting open at 2000 hours. The usual minutes were read and confirmed and then the President called on the guest speaker of the evening, Mr. Len Jackson, to talk on the ever-absorbing subject—antennae. Len opened his remarks with a brief description of a simple dipole and then proceeded through all types of aerials, right up to the series phased arrays. Numerous questions were fired at Len and the President had to call time, so as to get the rest of the business finished.

A short interval was taken and upon resumption of the meeting the usual reports were given. The most important item was the 24th Anniversary celebration arrangements. By the time this appears in print, the celebrations will be all over. The Secretary reminded members that agenda items of the next Federal Convention should be sent in by the December meeting. The Treasurer's report, as read by the Secretary, disclosed a good balance at the Bank. After a few more items of general discussion, the President closed the meeting at 2230 hours.

SABA and 3YS look very fit after their holiday in VK2. 3JO still worried about his 955. 3IM very busy with exams. 3LP had trouble with one of his poles. It crashed. Given now QRP. 3J nearly got strangled when his sky wire came down. 3BZ very QRL with DX C.C. claims. 3KE trape-

ELECTRONIC

A & R

EQUIPMENT

- Since the acquisition of new premises early this year the productivity of our factory is steadily increasing and the requirements of more and more Hams can now be met. Arrangements are being made to ensure that A. & R. Products will be readily obtainable in all capital cities. The increased output of our factory has been coupled with the consistent high quality of all A. & R. Products.
- Whatever the requirements may be—Power Transformers, Chokes, Audio Transformers, or Modulation Equipment—a large range of these items are being manufactured to meet the demands of the discriminating Ham who wants the best possible results from his rig. A. & R. Equipment has been developed with that end in view, to produce high quality products at competitive prices. When purchasing Transformers, think of the best value and insist on A. & R.

REMEMBER . . . GOOD TRANSFORMERS MAKE GOOD EQUIPMENT

A. & R. Products available from—Melbourne: Wm. Willis & Company, J. H. Magrath & Company, Homecrafts Pty. Ltd.; Adelaide: Gerard & Goodman Ltd.; Perth: A. J. Wyle Pty. Ltd.; Hobart: A. H. Gibson Electrical (Tas.) Pty. Ltd.

A. & R. Electronic Equipment Co. Pty. Ltd.

378 ST. KILDA ROAD, MELBOURNE, S.C.1

Phones: MX 1159, MX 1150

you know that 4IN, now in Brisbane, is ex-OSUD? Believe Fred is mainly on 40 metres. It was nice to see 4RG of Longreach at the last meeting as a visitor. 4RT now sports a four element beam, guess he will be too proud to talk to the cross-town DX now; as a matter of fact I haven't yet heard John on the 20 metre band, which reminds me I often wonder what has become of my old pal, 4GJ—having heard him for months on the 40 metre band.

4UX is contemplating installing a voice-operated transmitter control to operate after a delay of four seconds, but 4WG reckons that Claude's transmitter will never go off the air in that case. I wonder what made 4WG suddenly decide to go on the air again. Perhaps the novelty of a new car is starting to wear off.

How on earth 4AH gets into all the strife he does and comes out laughing I'll never know. His latest is that his YF complained that she was getting a "bit of an electrical shock" when she was hanging out the clothes. "Doe" investigated and thought it must have been some of the stray r.f. when he was transmitting—he has more than he wants. Anyhow he smartly altered his decision when he commenced to climb the tower and found that he had turned a few cartrivels and back-slips. It appears that "Doe's" beam is rotated with an electric motor and, in keeping with modern trends, he has a 240 volt excited relay transmitter up top as well. Naturally he has to get the juice up to it via wires—yes you have guessed it, the wires shorted during a wind (didn't blow the fuses—must be nails) and touched the tower (can't be earthed). The latter is of metal construction so naturally the clothes line which is attached to it would become quite a lethal weapon. Hope you can make sense of all the above, but it may serve as a warning of what might have happened.

"CLARE'S CORNER"

4UX is back on the air again chasing the DX after a complete re-build; Claude is also the proud possessor of a Hallicrafter SK28. 4AH has built himself a new receiver which from all accounts is a super-duper. 4MD not active lately owing to proximity of examinations; best of luck Mick and no doubt you will make up for it when they are all over. Have you got 4HF on the 40 metre band as usual; is it the lounge suite or the 866a Noel?

4CC is quite a picture-guy, but I very much doubt if his wife will be able to drag him along to see "Gone With The Wind." Since Clive put his beam up, he has been a little sceptical about it, and even took some photographs before putting it on the pole. Anyway it is still up and on the air job.—Clare. (4FP must have been worried too—

he arrived at my place with four bags of cement for the guy wire posts—grails. Thanks Jack—Sub-Editor.)

DARLING DOWNS ZONE

Zone activities for the past month have been just the usual run-of-the-mill affairs with one chap working the other for absolutely no reason at all. Conditions generally have improved, particularly in the 40 metre band where there have been exceptionally good at night with the onset of summer conditions. Some excellent signals have been heard.

4IG and 4JC have been getting out very nicely with creditable phone signals for newcomers to the Ham ranks. Often think it's queer that 80 metres has so few starters in this zone. The Five Pupettes (the "little" guys) have been playing around with 60 Mc. and 4G has already QSOed 4KK. Likewise 4KK and 4TY have had some contacts. 4CU, 4XN and 4RK have weekly (sometimes daily) QSOs in the wee small hours round 7.30 a.m. An amazing display of stamina for boys of their age. 9.30 a.m. is a nice time for breakfast in any home.

Lots of nice DX coming through on 14 Mc. late at night—midnight on. Europeans in scores, Africans, Asians and South Americans. We heard all continents in the course of one swift round the band and all over ST. VK1PG (ex-2PG) is on regularly around 1380 G.M.T. 14130-150 Kc. looking for VK contacts. Uses 28 watts to a rhombic. Notice the local emergency net is slipping—some new ideas required along with a rearing of personnel and a change of policy with regard to equipment. The silly business of having to have portable gear wants wiping and an all-Ham-in-policy promulgated for the benefit of the community—not the self-glorification of the selected few.

TOWNSWINE ZONE

4EJ not very active due to newly acquired boat, but talking about installing gear in same. 4LD fairly active on 14 and 28 Mc.; nice quality phone and nice clean c.w. 4GF often heard on late in the evening with a nice signal and the 4TU good phone signals from BIL seems to use 14 and 7 Mc. quite a lot and does well too; he put up a good score on the 40 metre band. 4CMB has been active.

4QL, when not too busy writing DX notes, finds time to work a bit of DX on 14 Mc. he also put up a good score in the R.D. Contest. 4RX heard with nice quality phone when time permits. 4WH very active on 14 Mc. and often heard knocking them over in the afternoon; heard heard well in the VK-ELZ. 4VJ has had a new car and has made my electronic bug and very pleased with it.

Still keep up my motto of "A European a Day," although it is generally a dud. Still to be used arrays, Lazy H is the best with Collinear next.

SOUTH AUSTRALIA

The monthly general meeting for the VK6 Division took the form of a "Buy, Sell or Swap" evening, and to say that it was a huge success would be classed as an understatement. Everybody came along to see the junk, as they called it, and everybody said in a very sophisticated manner, "you don't catch me falling to any of that junk." Certainly they didn't fall for it; they crashed head-long into it. The associate members practically fought with each other for the privilege of bidding against each other and one youngster increased his bid another sixpence without anybody bidding against him. Anyway, it was a wonderful night, and the master of ceremonies, 3BY, did more than his share to make the night a success. 5RF left the meeting loaded like a pack horse with all the radio gear in the world. One associate member had to hire a taxi to take all that he had bought, but the look on his face as he proudly displayed his spoils made many an old-timer wish that he could recapture the first flush of his enthusiasm for Amateur Radio. To sum it all up, we should have more of these nights.

That stork that was flying around Henley Beach last month apparently gets around because 3BC became the proud father of a baby daughter a couple of days ago, although I have no particular as yet. Congratulations Madge and Hughie. 3LW is another one who would not listen to my advice about that stork that tried to get down my chimney, and consequently it was attracted by his beam and pausing to see if it was a ten or twenty metre beam, the stork liked the look of the QTH, and to cut a long story short, Ross became the father of a beautiful baby daughter. I rang him up to find out all the particulars and he said that the little darling's name was Brooklyn.

By the time these notes are getting ready for print, 65L will be getting ready to say "yes." Best of luck Patricia and Laurie, and what about a piece of wedding cake to put under my pillow so as I can dream of my past. You beautiful!

Every month or so I do a bit of a winged about the scarcity of Amateur news and how difficult it is to find enough to fill these notes. Except for a few old reliables who send in some notes regularly, I am forced to work on my imagination quite a lot. Now what about it fellows, it is a lot easier to write facts than to think a lot of fiction, and even

Setting a New Standard in Communication Receivers—

The "Commander" Double Superhet.

Free Data Sheets on Request

Interstate Representatives: West. Aust.—Messrs. Atkins (W.A.) Ltd., 894 Hay St., Perth. Queensland—Messrs. A. E. Harrold, 123-5 Charlotte St., Brisbane. In other States direct your inquiries to firms handling Bright Star Crystals.

Valves, new, boxed, RCA 834s, £1/8/- each.

Limited number of the following Taylor Tubes: TZ20s, £2/10/- each; TB35s, £6/10/- each.

Transmitters altered for Bush Fire and Fishing Boat Work.

CRYSTALS, as illustrated, 40 or 80 mx., AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each.

Large, unmounted, 40 or 80 metre, £2 each.

Special and Commercial Crystals—Prices on application. Crystals re-ground, £1 each.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs. A. E. Harrold, 123 Charlotte St., Brisbane; A. G. Healing Ltd., 151 Pirie St., Adelaide; Atkins (W.A.) Ltd., 894 Hay St., Perth; Lawrence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 409 Lansdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

A.W.A. Split Stator Transmitting Condensers, high voltage, £2/15/- each.

Screw-type Neutralising Condensers (National type), suits all triode tubes, Polystyrene insulation, 19/6 ea.

Prompt delivery on all Country and Interstate Orders.

Satisfaction Guaranteed.

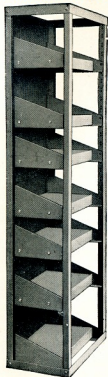
BRIGHT STAR RADIO

1839 LOWER MALVERN ROAD, GLEN IRIS, VIC. Phone: UL 5510.

The danger period for executive officers of the VK5 Council seems to have passed, as both the President and the Secretary are now well on the way to their new homes. The latter, I believe, they both had a bad time and we are pleased to welcome them back to Council. 5CH is still not getting much time for Amateur Radio but always has a few contacts. I have heard that he has had quite a long spell of week-end work at the local power house, but I believe that it is at long last coming to an end. 5MB has just recovered from a bad cold and is now back in the saddle (and beautiful) and also, Stewart has had his 20 metre beam down for alterations. It is now fixed by a T match. 5KB is the latest recruit to 144 Mc. Peter has been away from the club for a while, but has his new location and although he has had no contacts as yet on the v.h.f., he has been on 40 metres to get his share. 5TW has had another quiet month, but has had some contacts on 40 metres. 5M has been very active on 40 metres and 20 metres. Tom is still pleased with his new aerial (thanks to our President). You'll get on Col, slipping that one in on me!

for their generous support in making the Field day a real success: Newton McLaren Ltd., £2/2/-; Gerard & Goodman Ltd., £2/2/-; B.I.P. Co., Whyalla, £4/2/-; Philips Electrical Industries, an 854 Ltd., £2/2/-; J. Wilson & Co., Ltd., £1/1/-; Radio Electric Wholesalers Ltd., 10/6; Mr. Peter Spencer of Whyalla, a ball point pen; 5VM, 100 QSL; CE, three front-loading bezels. Our grateful thanks are due also to GUY who supplied an amplifier, and JY who made the record for the code speed contest. The W.A. group was represented by 100 stations. Let's see the W.I.A. put on a big day (at National Park, say) each year on N.F.D. or on some public holiday.

During the month of October an all round improvement in conditions of the more popular bands became evident, and during the course of the month increased numbers of notices were noticed. Some working DX or engaged in rag chewing. Congratulations must be extended to the North-Western gang on their activities especially 7AB and 7KB, whose efforts to popularise our v.h.f. allocations is well worthy of mention. During the course of a weekend, portable equipment was taken to the "Bluff"



EDDYSTONE EQUIPMENT RACKS

The complete assembly comprises four uprights, top and bottom frames, top plate, front panels of various depths, side brackets, and the requisite number of chassis. The construction throughout is of mild steel and holes have been punched out in all members so that they clamp together easily by means of $\frac{1}{2}$ " B.S.F. bolts, which can be supplied. The uprights are channelled, to give additional strength, and up to ten chassis may be fitted in any one rack. The panels are finished ripple black and the other parts glossy black.

The dimensions, which conform to International standards, are as follows:—

Chassis	17" long, 10" wide, 2" deep.
Panels	19" long, $3\frac{1}{2}$ ", 7", $8\frac{1}{2}$ " or 10 $\frac{1}{2}$ " deep.
Angle Brackets	12 $\frac{1}{2}$ " long.
Uprights	63" long.

Cat. No. 615—Pair of Front Vertical Channels.	Cat. No. 618—Pair of Angle Brackets.
Cat. No. 642—Pair of Rear Vertical Channels.	Cat. No. 622— $3\frac{1}{2}$ " Panel.
Cat. No. 617—Standard Chassis.	Cat. No. 621—7" Panel.
Cat. No. 616—Pair of Frames (top and bottom).	Cat. No. 620—8 $\frac{1}{2}$ " Panel.
Cat. No. 636—Top Plate.	Cat. No. 619—10 $\frac{1}{2}$ " Panel.

We are also able to offer a HALF SIZE RACK, which will be found useful where the full size rack is too large. No top frame or rear channels are necessary with the smaller assembly, which is listed both as a complete combination and separately. The short rack can be easily extended when desired by using a pair of Junction Pieces (Cat. No. 748) and an additional pair of Vertical Channels (Cat. No. 746).

Cat. No. 745—Bottom Frame.
Cat. No. 746—Pair of Short ($31\frac{1}{2}$ ") Vertical Channels.
Cat. No. 747—Pair of Tie-Bars.
Cat. No. 748—Pair of Junction Pieces.
Cat. No. 743—Half-Size Equipment Rack, comprises: pair of Channels (Cat. No. 746), pair of Tie-Bars (Cat. No. 747), Bottom Frame (Cat. No. 745), and Fixing Bolts.

WRITE YOUR NEAREST EDDYSTONE DISTRIBUTOR FOR A COPY OF THE LATEST ILLUSTRATED CATALOGUE.

Australian Representatives:

R. H. CUNNINGHAM PTY. LTD.

62 Stanhope St., Malvern, Victoria (Phone: UY 6274)



Illustrating the Standard Chassis (Cat. No. 617) with Cat. No. 619 Panel and pair of No. 618 Angle Brackets.



QSL CARDS

The DEE WHY PRINTING WORKS is making available to the Amateur Experimenter a Special QSL Card Printing Service. Knowing the requirements of Hams, we are confident the service offered will be unsurpassed in Australia.

Cards can be printed to your own specifications, and if illustrations or blocks are necessary, our Art Department can produce these for you.

- ★ The Ham specially catered for.
- ★ Quality Cards at economical prices.
- ★ Prompt Service.
- ★ One, two or three colours if required.
- ★ Interstate orders handled.

Dee Why Printing Works

67 HOWARD AVENUE, DEE WHY, SYDNEY.

Telephone: XW 8367.

Proprietor: GEOFFREY BOWER



AEGIS KC4 Four-Band Tuning Unit

The most advanced
COIL ASSEMBLY
ever offered in
AUSTRALIA

Here's something for
the EXPERTS

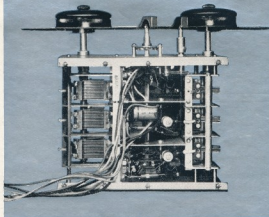
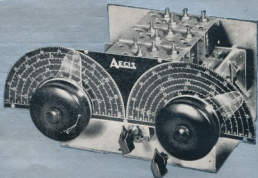
The new Aegis 4-band, bandspread tuning unit illustrated at the right is definitely the answer for the Amateur who desires to build his own communication receiver. Here are the plain facts of this latest Aegis triumph—

4 Wave Bands		Band-Spread—5 Bands	
550 Kc.	1500 Kc.	3.5 —	4.0 Mc. 80 Metres
1500 Kc.	4 Mc.	6.9 —	7.3 Mc. 40 Metres
4 Mc.	11 Mc.	14.0 —	14.4 Mc. 20 Metres
11 Mc.	30 Mc.	20.5 —	22.0 Mc. 15 Metres
		27.0 —	30.0 Mc. 10 Metres

Actually constructed in three sub-sections comprising R.F., Converter and Oscillator stages. Finally assembled in one unit, which incorporates Band-Set and Band-Spread Condensers, together with two Slow Motion Drive Assemblies 55/1 and directly calibrated Plastic Dial, Valve Sockets for R.F. (6SK7GT), Mixer (6AC7), and separate Oscillator (6SK7GT) stages are already wired. Concentric air trimmers are used throughout, and the six section "Oak" Type Switch includes shunting banks for all coils not in use. Aerial Trimmer is brought out to front panel with 1-inch shaft. Screws for iron core adjustment in all coils are readily accessible from top of unit, as are also the Trimmer Screws.

For use with the KC4, we recommend Aegis I.F.s, Type Nos. J22 and J23, specifically designed for communication work. A complete set of blueprints for connecting this unit plus a most comprehensive Communications Receiver Circuit are supplied with each Kit.

See your distributor right away for your
Aegis KC4 Coil Assembly.



AEGIS

MANUFACTURING CO. PTY. LTD.
208 LIT. LONSDALE ST. MELB.
PHONE CENT 4414, 5171

DISTRIBUTORS IN ALL STATES

MELBOURNE:
Lawrence and Hanson Electrical Pty. Ltd.
Replacement Parts Pty. Ltd.
Vealls Electrical and Radio Pty. Ltd.
Homecrafts Pty. Ltd.
J. H. Magrath & Co.

SYDNEY:
John Martin Pty. Ltd.
George Brown & Co. Pty. Ltd.
Fox & Macgillivuddy Ltd.
Cook Bros. Pty. Ltd.

ADELAIDE:
George Procter (Factory Representative).
Newton, McLaren Ltd.
A. G. Healing Ltd.
Harris, Scarle Ltd.
Oliver J. Nilsen & Co. Ltd.
Gerard & Goodman Ltd.

BRISBANE:
Chandlers Pty. Ltd.
A. E. Harrold Pty. Ltd.
B. Martin Pty. Ltd.

PERTH:
Nicholsons Ltd.

TASMANIA:
Lawrence and Hanson Electrical Pty. Ltd. (Hobart).
Lawrence and Hanson Electrical Pty. Ltd. (Launceston).